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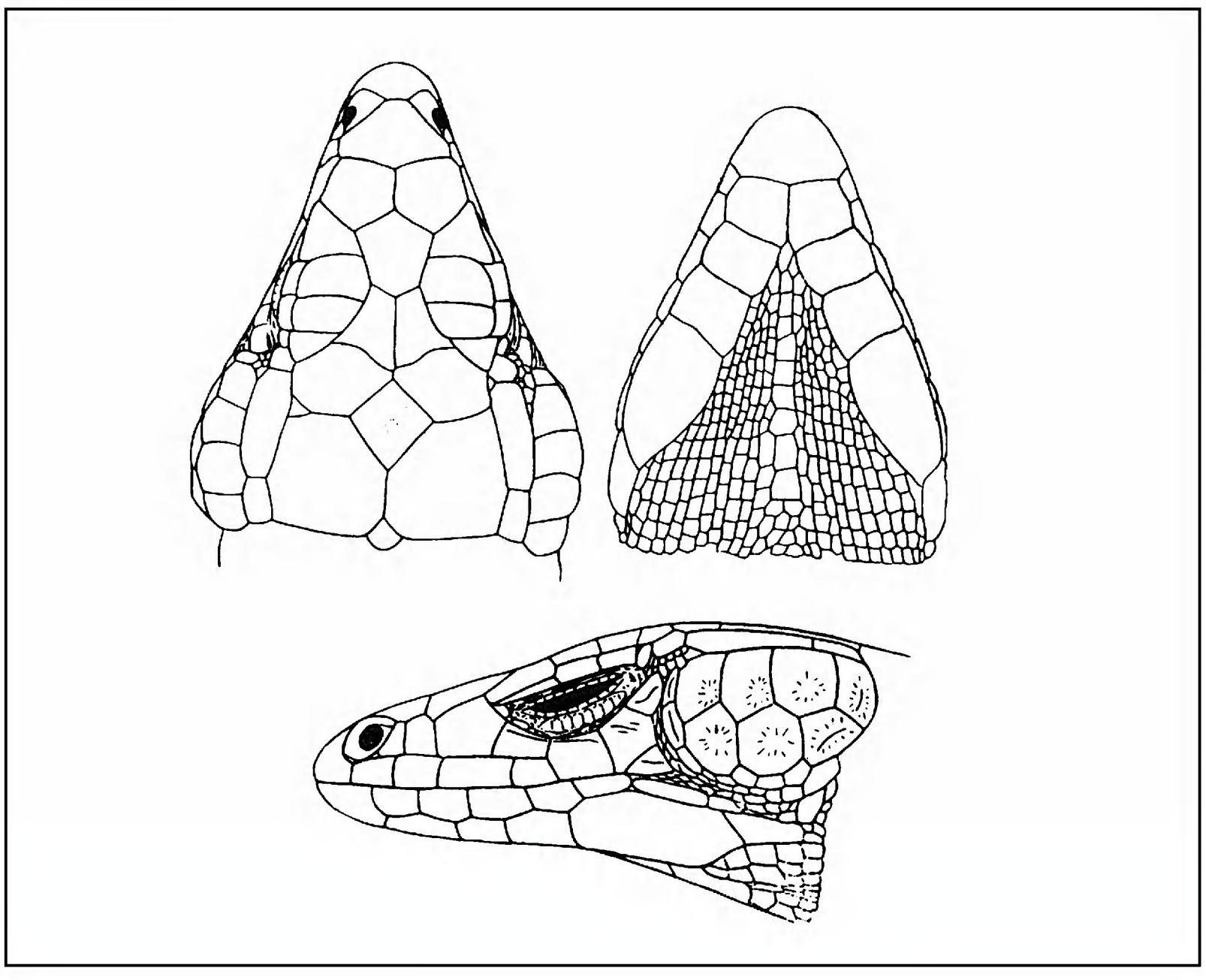

BULLETIN OF THE CHICAGO HERPETOLOGICAL SOCIETY

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Care and Breeding of the Emperor Flat Lizard, *Platysaurus imperator*, in Captivity

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Abstract

This paper offers information on the captive husbandry of *Platysaurus imperator*. Further, it explains the steps involved in breeding this rare lizard in a captive environment. Detailed descriptions of the adult and juvenile enclosures are given as well as the general husbandry routines preformed for the maintenance of the emperor flat lizard in captivity. One male and two female lizards were set up in an enclosure, off exhibit in the reserve area of the Klauber-Shaw Reptile House of the San Diego Zoo. From Nov 1999 to Oct 2000 10 clutches of eggs were laid, from these, seven neonates successfully hatched. This represents the first successful captive breeding of this species in any American Zoo and Aquarium Association accredited institution. The author studied the natural history of *Platysaurus* lizards to help determine the best light cycles, temperature regimes, feeding and husbandry requirements. For example, spraying the adult lizard enclosure heavily with water during the summer period not only served to keep the lizards hydrated but simulating the rains the species would encounter in their natural habitat seemed to spur on the courtship behavior. It is also recommended that a wide variety of food items are offered and these are listed along with a brief feeding schedule. Females were offered a nest box to lay in and once laid, the eggs were pulled for artificial incubation. Weights and measurements of the eggs are shown as well as the temperature the eggs were incubated at and the number of days until hatching. Neonate snout–vent lengths and weights are given and a brief synopsis of their husbandry is given.

Keywords: *Platysaurus imperator*, husbandry, reproduction, Cordylinae

Introduction

Information on the reproductive cycles of African lizards, particularly within the family Cordylidae, is sparse (van Wyk and Mouton, 1996). In this article I attempt to shed some light in this area and hope to share my experiences for the better maintenance of this lizard species in captivity. *Platysaurus* is the only oviparous genus within the subfamily Cordylinae (Zug, 1993). *Platysaurus imperator* occurs in northeastern Zimbabwe and adjacent Mozambique (Broadley, 1988: p. 383), and is disjunctly distributed within its range. *Platysaurus imperator* populations are restricted to isolated granite, gneiss, and sandstone rock outcrops surrounded by mesic savannah (Branch, 1988). *Platysaurus imperator* is a saxicolous, dorsoventrally flattened cordylid (van Wyk and Mouton, 1996) that inhabits the cracks and crevices of large boulder outcrops.

There are 11 recognized species within the genus *Platysaurus* (van Wyk and Mouton, 1996), *P. imperator* being the largest member of this genus (Broadley, 1974). This species exhibits sexual dimorphism with males reaching larger snout–vent length (SVL), up to 146 mm, while females attain SVLs of up to 120 mm (Broadley, 1974). The adult male specimen housed at the San Diego Zoo (SDZ), measured 135 mm SVL and the two adult females each measured 113 mm SVL. *Platysaurus imperator* also exhibits sexual dichromatism, displaying great differences in coloration and pattern between the adult sexes (Whiting and Greeff, 1997).

Female and juvenile *P. imperator* are black, with three light yellow stripes running from the nose to the base of the cream-colored tail. Adult males have a light green head, orange body, and pale green tail with black legs and belly (Branch, 1988). These lizards are social and are usually found in colonies where males jealously defend their established territories (Branch, 1988).

Methods

At the Klauber-Shaw Reptile House at the San Diego Zoo, one male and two female *P. imperator* were housed in a 135 × 60 × 60 cm (l × w × h) oval enclosure. Gravel was used as substrate and cork bark slabs of various sizes provided refuges for the lizards. The bark slabs were layered and stacked on top of each other to simulate cracks and crevices the lizards would be using in their natural habitat. Cork was used as opposed to actual boulders, because the bark is lighter and easier to manipulate than large rocks and reduces the risk of injury to the lizards.

Artificial lighting, on a photoperiod of 12 hrs, was provided by a 120-cm fluorescent fixture using Philips F40C50 Colortone, 40-watt, and Sylvania F40/350BL 350 Blacklight bulbs. During the summer season two 120-watt spotlights were used on a photoperiod of 6 hrs on at midday. During the winter season only one 120-watt spotlight was used and was on a four-hour photoperiod on at midday. The lighting sat directly on top of the screen cage top and care was taken to assure that the lizards were not capable of reaching the cage top and potentially burning themselves.

Daytime ambient temperatures ranged from 23 to 32°C in autumn/winter (November–March) and from 28 to 38°C in spring/summer (April–October). Nighttime ambient temperatures ranged from 15 to 20°C in autumn/winter and 17 to 25°C in spring/summer. High summer temperatures could

potentially dehydrate the lizards; therefore two shallow water bowls were placed on either end of the enclosure and the entire enclosure was sprayed heavily with water once per week. It should be noted that courtship between the adult male and females was routinely observed after spraying the enclosure with water. The cork bark slabs were removed weekly and hosed clean and the gravel substrate was also raked clean of any feces and debris. During the winter season, one water bowl was offered and the enclosure was lightly sprayed with water every third week, though cleaning of the enclosure continued to take place weekly.

Primarily insectivorous, adult *P. imperator* were fed a varying diet of crickets, wax worms and kingworms that were dusted with Herptivite (Rep-Cal Research Labs, Los Gatos, CA) vitamin and mineral supplements. A raw turkey, vitamin and mineral mixture formed into small meatballs and pinky mice were offered as well. Occasionally grapes were offered as a substitute for figs, which may comprise a large part of the wild population's diet (Greeff, 1999). The grapes were dusted with vitamins and readily consumed by the lizards. Varying food items were offered to the lizards every second day during the summer season and every third or fourth day during the winter season.

Platysaurus imperator is an oviparous lizard with females being ovigerous in summer (November through December in the Southern Hemisphere) (van Wyk and Mouton, 1996). Females at the SDZ laid eggs primarily in the Northern Hemisphere summer season, between March and October.

Clutch size is small consisting of no more than two eggs, and these are usually laid in moist leaf debris deposited in the cracks and crevices of the boulder outcrops on which the lizards live (Branch, 1988). We provided a 20 × 30 × 5.5 cm (l × w × h) plastic box with a tight-fitting lid to simulate a nesting fissure for the female lizards to lay in. The lid had a rectangular hole cut in one end and the container was filled with soil to a depth of 3.3 cm. This nest box was placed in the enclosure and covered with cork bark slabs to provide additional cover and security to the laying females. The nest box was checked weekly for eggs, which were usually found lying horizontally and half buried in the soil. It should be noted that both females were found often in the nest box, both together and alone, and with eggs both present and absent.

Once laid, the eggs were then removed from the nest box, weighed and measured. The eggs were then placed into a clean shallow plastic container half filled with a mix of vermiculite and water in a 1:1 ratio by weight.

The egg container was then sealed with a tight fitting lid and placed in a Marsh Automatic Incubator (Lyon Electric Co. Chula Vista, California) set at 30°C. Eggs were weighed and measured again at 15- and 30-day intervals, at which times the vermiculite was changed and a clean plastic container was used. Eggs hatched between 79 and 87 days. Eggs measured from 26.1 to 28.2 mm in length and from 11.3 to 14.5 mm in width when first laid. The eggs usually adhered to each other; the combined weight of both eggs in each clutch was between 3.8 and 4.9 g.

Results

From November 1999 to Oct 2000, 10 clutches, each consisting of two eggs, were laid. Females were cycling together, laying eggs within 1–5 days of each other and at the same clutch interval of 2 months.

Seven *P. imperator* successfully hatched, measuring from 43.6 to 47.3 mm SVL and weighing from 2.0 to 2.5 g at birth. Neonates were reared in 10-gallon glass terraria. Gravel substrate, cork bark hides and shallow water bowls were used. Ambient fluorescent lighting on a 12-hour photoperiod as well as a 50-watt spotlight set on a 4 hr photoperiod on at midday, were used, suspended directly above the screen-topped enclosures. Water was available at all times to the neonates and crickets, wax worms and turkey vitamin-mineral mix was offered every other day.

Discussion

In their native habitats, *Platysaurus* lizards have been known to use vertical crevices containing damp leaf mold as egg-laying sites. With *P. intermedius rhodesianus*, there have been several instances recorded in which many eggs were found together at one nest site, perhaps indicating a trait of using communal egg depositories (Broadley, 1974). The two female *P. imperator* housed at the SDZ continually used the same nest box and were often found within the nest box at the same time, occasionally with eggs present. The male *P. imperator* has never been seen in or on the nest box. While further study is needed to establish whether this is a sign of communal nesting in this species, it may be at least an indication of such.

Although it has been noted that *Platysaurus* produce only one clutch of eggs annually (Broadley, 1974; van Wyk and Mouton, 1996), the two female lizards at the San Diego Zoo have repeatedly laid more than one clutch each per season. This may simply be a byproduct of the optimum conditioning of a captive setting or it may show that, at least in *P. imperator*, double or triple clutching is common and may contribute to the relatively large number of eggs found in some communal nest sites (Broadley, 1974).

In this paper we focus on the maintenance of *P. imperator* in a captive environment. Although we have gained insight into the reproductive biology of this species, more needs to be learned in the area of behavioral ecology. Some recent work has been done with *P. broadleyi* in this regard (Whiting and Bateman, 1999). Although the biological significance of observations made in artificial environments must be confirmed in the natural habitat (Michael, 1995), captive breeding of these specimens may one day prove to be a useful tool in the conservation of this and similar species.

Acknowledgments

I thank the Zoological Society of San Diego. I also thank Don Boyer, Robert Lovich and Jeff Lovich for encouraging me to write and for their helpful comments and suggestions upon reviewing the manuscript. Thanks to all my colleagues at the Klauber-Shaw Reptile house at the San Diego Zoo.

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Herping in Australia—Field Notes and More
Part 9: Granite Country

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Going West

Even Sydneysiders get bored with their local herps. It may seem strange to American readers that a herper could ever get bored with living in a city full of nice weather, surf beaches, death adders (*Acanthophis actarcticus*), diamond pythons (*Morelia spilota*), about twenty other species of snake, dozens of really cool lizards and dozens more really exciting frogs. But yes, this actually happens. And so the herper travels.

Because of Sydney's location on the east coast of Australia, one can only travel by road south, west or north. The south is generally not bothered with because almost all the cool-climate species tend to be found in the cooler uplands of the Great Dividing Range, including the Blue Mountains, immediately west of Sydney. So most Sydney herpers wouldn't bother trekking 600 km south to northeast Victoria to find what they can just as easily get an hour's drive west.

Thus the only logical directions are west and north. As it happens, a lot of species common to southeast Queensland (some 1000 km to the north) have their distributions extend down the New South Wales coast almost as far as Sydney. These include such rainforest species as the rainforest dragon (*Gonocephalus spinipes*), the land mullet (*Egernia major*), Krefft's dwarf snake (*Cacophis kreffti*) and Stephen's banded snake (*Hoplocephalus stephensi*) all found to within 100 km of Sydney, in the general Gosford, Newcastle region.

And so the direction of most interest to many a Sydney herper is west. As it happens you don't even need to go all that far west of Sydney to see a major change. Just a couple of hours drive west will get you over the higher peaks of the Blue Mountains and into the Granite Belt typical of the western side of the Great Dividing Range. For those who don't know, this is the mountain range that runs more or less continuously from Cape York, Queensland, down the East Coast and then around the center of Victoria to southeast South Australia.

The habitat of this granite belt in southeast Queensland through New South Wales to Victoria and into South Australia is cool open forest country with hilly to flat terrain, with or without granite rock outcrops on the ground surface. One of the staples of this habitat is the Cunningham's skink (*Egernia cunninghami*) and in places they occur in really huge numbers. This spiny saxicoline (rock-dwelling) species is perhaps the best known lizard of the genus *Egernia* in Australia and is common in herpetoculture in the USA and Europe.

And while these lizards are most at home and found in the biggest numbers in rocky habitats, they are by no means restricted to it, although few herpers might realize this. My first trip to the granite belt west of Sydney's Blue Mountains was to the town of Oberon about two-and-a-half hours' drive west of Sydney, somewhere between Lithgow and Bathurst and vaguely south of the highway that joins both towns. Oberon's role is as an agricultural region, relying mainly on sheep grazing. Most of the land is cleared, with patches of remnant forest on the steeper slopes and areas deemed to have less fertile soil. Many, but by no means all areas have granite rock outcrops dotted across the landscape. These fragmenting rocks form the

primary habitat of Cunningham's skinks.

Studies have shown they take some six years to become sexually mature in the wild and stop growing at about eight. They breed, er, well like Cunningham's skinks, with 3–5 being the normal number of young (based on my own records). In common with many cold-climate areas, Oberon, which is a cold 885 meters above sea level has a lesser species diversity than warmer areas, including Sydney, but in many cases individual localities within the district make up for this in terms of sheer numbers of herps to be found.

The first time I went to Oberon was in December when I talked my then girlfriend's parents to drive us with them to the town. They were originally going alone to stay a few days at a motel owned by a friend on the outskirts of the town. They wanted to escape the Sydney city "ratrace" for a few days. The drive out there was fantastic. It poured rain all the way.

Oh, I forgot to mention another important feature or two of Oberon. Besides the clearing of most areas of trees, the local farmers had spent the last two hundred years putting in small dams across their properties. These dams were placed in almost every fenced off area to enable grazing stock to drink. Of course what the dams also became were prime fish-free breeding sites for frogs. And so over the last 100 years or so, the Oberon area has had a population explosion of frogs.

As we drove along the main road towards the township of Oberon the road was littered with crossing frogs. They seemed to be in a variety of shapes and sizes. I managed to get my girlfriend's parents to stop several times and the species we found were the smallish treefrog *Litoria alpina* (a form similar in most respects to *L. verreauxi* from Sydney and elsewhere, but larger) the banjo frog (*Limnodynastes dumerilii*) and the spotted grass frog (*Limnodynastes tasmaniensis*). The latter two species seem to be almost everywhere in southeast Australia.

Yes, the numbers were high, but the diversity was down. When we arrived at the motel, the others checked into the rooms while I wandered off into the rainy night in search of yet more frogs. Water was running down a roadside ditch and there were yet more frogs croaking. I soon caught three of the culprits (or others nearby). All were large *Litoria raniformis*. This species is known as either the warty bell frog or growling grass frog with reference to their call. Like the closely related green and golden bell frog (*Litoria aurea*), numbers of these large pond-dwelling treefrogs appear to have declined in southeast Australia over the last two decades (especially in New South Wales).

The Day Hunt

In spite of the torrential rain all night, we woke the next morning to a coolish but sunny day. The motel had been well chosen. You see it was situated about 100 meters from the Oberon rubbish tip. At the crack of dawn I was there lifting up all the sheets of tin and other rubbish I could find. I soon caught two more of the staples of the Oberon area. I soon had seen several specimens of the small burrowing skink *Hemiergis decresciensis*. Common around here, it is apparently restricted to the granite belt and is therefore not a species seen around Sydney. Similar species from the same genus are found elsewhere in southeast Australia. And yes, like many of the common small skinks from southeast Australia we still know next to nothing about them.

Perhaps of even greater interest to most herpers was that other staple of Oberon I soon had in my hands. It was a large adult alpine blotched bluetongue lizard (*Tiliqua nigrolutea*). These are reasonably common around Oberon and best found by seeking out so-called "tin spots," which are like magnets for them.

Later the same day, we headed towards Black Springs (just south of Oberon), where we we meant to go searching for sapphires in a small rivulet. The habitat was the same as is typical for the area. Generally high altitude country with low lying and sometimes rocky hills. The terrain was mainly cleared with sections of remnant woodland scattered about. Most of the open country was actually covered in thick grass tussocks, which when combined with the numerous swamps and dams made it prime frog habitat.

Which gets us back to the other thing that makes Oberon well-known to herpers. You see frogs in big numbers brings something to eat them and that's snakes. I soon found a large black snake sunning itself in front of a rock. As I approached it, it fled down a hole. Because the ground was like rock, I couldn't dig it out. And so I decided to wait it out. Ten minutes later, the snake hadn't come out and so I took a stroll for another ten minutes. Upon returning to the site, the snake again made its way down the hole. But this time I made a dash and grab and got it by the tail before it'd made its full escape. The one-meter snake was soon in a bag. Half an hour later I had another similar sized brown snake in another bag and within five minutes of that I had a third brown snake in a bag.

Which gets me to tell you what kind of snakes you actually find in the immediate vicinity of the Oberon township. If you ask the locals they'll usually tell you: "black, brown and tiger," or maybe "black and brown." Mention the name "copperhead" and most people there look at you as if you're on another planet, perhaps retorting with something like "Oh, no, never heard of one of them." As it happens the *only* snake you find around Oberon is the copperhead! Trust me, I know. Highland copperheads (*Austrelaps ramsayi*) are large elapids that when they occur in large numbers eat all other snakes out of existence. They are more cold resistant than the other large elapids and because of their cannibalistic habits literally run all over their competition in these areas.

Now if you go to the south or east of Oberon to either Porters Retreat (about 44 km south) or Jenolan Caves (about 25 km east) where the habitat is closer to the natural state and generally more forested, you find other species of snake such as the small-eyed snake (*Rhinoplocephalus nigrecens*). But around Oberon it's only the copperheads.

Obviously what has happened over the past hundred years or more around Oberon is that the population of these copperhead snakes has literally exploded as the frogs numbers have similarly gone up. Then with their sheer weight of numbers they appear to have eaten their competition out of existence.

Now some of you may be asking how I could tell you about catching a black and then a brown snake at Oberon and then claim that these species don't exist around there. Well here's the story. The first snake was jet black in dorsal color; the second was medium brown. And that's why all the Oberon locals were confused. They just assumed that a snake that was black must be a "black snake," while one that was brown must be a "brown snake." In actual fact, all were copperheads.

And yes, their color varies enormously. But the giveaway that they are all copperheads is the distinct white barring of the labial scales, which is something you'll never see in any of the true black snakes (*Pseudechis*), brown snakes (*Pseudonaja*) or tiger snakes (*Notechis*).

And where did the idea that there were tiger snakes around Oberon come from? Well I can only guess. Perhaps because of the relatively thickset appearance of the copperheads. Physically they look similar to tiger snakes, which are generally more stout than either the black or brown snakes. Or perhaps it may have something to do with the bar that appears on the back of the head, that may occasionally lead a casual observer to think that the snake had bands (like a "tiger"?)

This business of copperheads overrunning other species seems to be a common trend I've observed in other colder areas of the southern highlands of New South Wales. Where the habitat is relatively undisturbed from the original state, copperhead numbers are less and other cold climate species such as small-eyed snakes and white-lipped snakes (*Drysdalia coronoides*) hang about and compete for survival. But when the habitat has been heavily cleared and turned into a frog heaven of dams and swamps, the copperheads appear to have mass-produced themselves and overrun the other snakes.

I never had trouble keeping my copperheads. I kept them in an under-house room without heating and fed them mainly on frogs. That was back in the days before licensing and when frogs were so common that I could go to a nearby creek and catch dozens of them. They bred, er, well like copperheads and I managed to get 13 and 14 young out of two separate females, including the so-called "black snake" I mentioned above. All the young look dark grey or black when born! Ah, maybe locals around Oberon were finding these and thinking that they had juvenile "black snakes"?

My copperheads didn't need to be separated to mate and bred a year after I caught them when there were four of them crammed into a single two-meter cage! As time went on, my collection of reptiles inexorably grew, and I eventually had to cull animals from the collection at much the same rate I was acquiring new ones. I eventually carted most of my copperheads back to Oberon and released them. This was because I literally couldn't give them away!

I'd given away lots of my newborns to various herpers and they'd lost the lot! Why, I can only speculate. However, the general trend was that most of these people were heating their copperheads like they did for their pythons and other reptiles. Put simply, the copperheads simply couldn't tolerate this. This was in many ways a tragedy, as in the captivity situation, I found my copperheads to be generally docile, easy to handle and generally great captive snake. Put it this way, I couldn't say a bad thing about mine!

And so I offer the following advice. If you ever keep (Australian) copperheads, don't heat them excessively and make sure that there is always a temperature gradient in the cage and "cool spots" for them to escape the heat. Do this, and you shouldn't have any problems.

I should perhaps make mention of the frog-feeding habits of the snakes. They also eat mice as captives, but wild caught animals may also have parasite burdens due to their earlier frog intake. A general wormer should remove these potential problems. Having said that, mine were never wormed and never showed any health problems.

Lizards

Returning to the Cunningham's skinks, around Oberon they are usually a dark chocolate brown color, but heading north of there they tend to get more and more white flecks. By the time you get to Bathurst and north of there (some 46 km north of Oberon), most specimens are distinctively more flecked.

Most people find these lizards by looking around large boulders and finding them hiding in crevices. The skinks are then poked out using a stick. This is never an easy process and due to the size and depth of crevices, it's common to be unable to capture many of the lizards seen.

Using my reptile-finding dog it was a totally different ball game. For best results I'd simply find a scree slope. These are common in the granite belt and typically have far more rocks than a herper could ever possibly lift. That is how in the normal course of events, most lizards would manage to avoid detection. The dog however would simply walk among them sniffing for scents. He'd bark when he found one with a lizard under it. Within a few hours more than twenty Cunningham's skinks could be caught.

Which brings me to the "discovery" that Cunningham's skinks are also common in areas without rocks. When searching these areas for herps, my dog would often bark at reptiles found sheltering inside hollow logs. Around Oberon, these were usually Cunningham's skinks, or to a lesser extent blotched bluetongues. Also of note was that the Cunningham's skinks often occurred in the logs in pairs.

I kept several Cunningham's skinks in large outdoor pits at my Sydney home for many years. They bred every year (in late summer/autumn) having from 3 to 5 young at a time. About one in three lots of young born would be stillborn and I was never able to find out the cause of this. I did however assume that it had something to do with the way I was keeping my lizards.

This theory took a bit of a thump when one autumn I saw several lots of stillborn young sitting on rock outcrops. The cause remains unknown, but I can only assume that such is fairly common in this species, or at least for the population that derives from around Oberon.

To be continued

Bull. Chicago Herp. Soc. 40(11):206-212, 2005

2005 Amphibians and Reptiles from Northwestern Mexico

Hobart M. Smith[1], Julio A. Lemos-Espinal[2] and Peter Heimes[3]

Abstract

The collection here reported from Sonora, Chihuahua and Coahuila represents 99 taxa, including subspecies: 15 amphibians, 47 lizards and 37 snakes. Two state records for Chihuahua as well as new material of such rarities as *Hypopachus, Diadophis, Micruroides* and *Pituophis deppei* are recorded.

All specimens here reported were collected by JLE and Peter Heimes during the summer of 2005, and are in the Herpetological Collection of the Unidad de Biología, Tecnología y Prototipos (UBIPRO), Laboratorio de Ecología, Facultad de Estudios Superiores, UNAM, Iztacala, Mexico state, Mexico.

Amphibians

Bufo cognatus Say. Coahuila: 13916, Arroyo El Pajonal, Sierra Tlahualilo (26°5′32.1″N, 103°19′26.0″W, 1103 m); 13943, Dunas Magnéticas, Río Aguanaval (26°36′45.7″N, 103°7′29.0″W, 1072 m).

Bufo debilis insidior Girard. Coahuila: 13939-42, Dunas Magnéticas, Río Aguanaval (26°36′45.7″N, 103°7′29.0″W, 1072 m); 13979-83, 14899-15159 (tadpoles), Ejido Abrevadero, nr Parras (25°24′15.8″N, 102°2′40.7″W, 1634 m). The tadpoles are very small, no more than about 2 days old, and were in the bottom of a dry pond, where hundreds of others were, about 7 days after they were breeding; the rain shower that prompted breeding was insufficient to permit development to transformation.

Bufo mexicanus Brocchi. Chihuahua: 14249, km 131, hwy 25 (27°29′38.6″N, 107°30′36.1″W, 2028 m). The inner metatarsal tubercle is only partially black, but the interocular light bar is present.

Bufo punctatus Baird and Girard. Chihuahua: 13907, Manuel Benavides (29°6′52.5″N, 103°55′37.6″W, 1200 m). Coahuila: 13887, Arroyo El Pajonal, Sierra Tlahualilo (26°5′32.1″N, 103°19′26.0″W, 1103 m); 13994, nr Ejido Abrevadero, nr Parras (25°24′15.8″N, 102°2′40.7″W, 1634 m); 14051, 4 km E La Casita (25°16′36.4″N, 101°25′52.9″W, 1743 m). Sonora: 14485-9, Yécora (28°22′4.0″N, 108°55′32.6″W, 1545 m).

Bufo speciosus Girard. Coahuila: 13995, 14061-2 (tadpoles), mpio Parras (25°19′41.8″N, 101°41′5.7″W, 1456 m); Ejido Abrevadero, nr Parras (25°24′15.8″N, 102°2′40.7″W, 1634 m). The adult has no cranial crests and no ventral spotting; both metatarsal tubercles are black.

Eleutherodactylus tarahumaraensis Taylor. Chihuahua: 14473, a small cave nr Ocampo (28°11′54.8″N, 108°22′12.2″W, 1867 m).

Gastrophryne olivacea mazatlanensis Taylor. Sonora: 14482-4, Yécora (28°22′4.0″N, 108°55′32.6″W, 1545 m). The bases for our recognition of this subspecies are noted in Lemos-Espinal and Smith (forthcoming).

Hyla arenicolor Cope. Chihuahua: 14217-8, Gorogachi (27°16′21.1″N, 108°32′7.1″W, 700 m); 14250, nr km 131, hwy 25 (27°29′38.6″N, 107°30′36.1″W, 2028 m); 14514-5, Cañón del Nido (29°29′41.2″N, 106°42′30.4″W, 2395 m).

Hypopachus variolosus (Cope). Chihuahua: 14221, Chínipas (27°23′39.9″N, 108°32′36.0″W, 469 m). Like the only other specimens reported from Chihuahua (Smith et al., 2005), this is an adult only 39 mm SVL, lacking dorsal pattern and fine white vertebral and rear thigh lines.

Rana berlandieri Baird. Chihuahua: 13860, Cañón de San Carlos (29°10′52.6″N, 103°42′31.8″W, 673 m); 23875, Ejido Nuevo Lajitas (29°8′31.1″N, 103°46′49.8″W, 805 m). Coahuila: 14001 (tadpole), 14008-14, river betw Parras and Gral. Cepeda (25°19′41.8″N, 101°41′5.7″W, 1634 m). The tadpole was disgorged by a *Thamnophis c. cyrtopsis*. The dorsolateral folds are broken and displaced posteriorly in the transformed individuals, and the posterior surface of the thigh is boldly reticulated.

Rana lemosespinali Smith and Chiszar. Chihuahua: 14247-8, nr km 131, hwy 25 (25°27′38.6″N, 107°30′36.1″W, 2028 m). The rear of the thighs is reticulated or lightly pigmented. One has 14, the other 23 dark spots between the dorsolateral folds.

Rana magnaocularis Frost and Bagnara. Chihuahua: 14219-20, Gorogachi (17°16′21.1″N, 108°32′7.2″W, 1545 m). The dorsolateral folds are displaced posteriorly, and the number of dark spots between them is 10 and 17.

Scaphiopus couchii Baird. Chihuahua: 14480-1, 5 km S San Buenaventura (29°52′33.6″N, 107°23′43.0″W, 1692 m). Coahuila: 13934, Sierra de Tlahualilo (26°5′32.1″N, 103°19′26.0″W, 1105 m); 13984-93, 14093, nr Ejido Abrevadero, mpio Parras (25°24′15.8″N, 102°2′40.7″W, 1674 m).

Smilisca baudinii (Duméril and Bibron). Chihuahua: 14212-6, Gorojaki (27°23′39.9″N, 108°32′9.7″W, 469 m).

Spea multiplicata (Cope). Coahuila: 13984, 13986,

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13992-3, 14092, 14094-8, Ejido Abrevadero, mpio Parras (25°24′15.8″N, 102°2′40.7″W, 1674 m).

In 14098, the dorsal warts are numerous and mostly separated by spaces less than their own diameter; the dorsum is unicolor gray-brown. In all others the interspaces are wider than the diameter of the warts; a broad median light area is present, irregularly edged dorsolaterally by the dark sides, and often a dim lateral light stripe is present. It is possible that two species, *S. multiplicata* and *S. stagnalis*, may be marginally sympatric in this area (Tanner, 1989). Further study is needed.

Lizards

Anolis nebulosus (Wiegmann). Chihuahua: 14211, Mesa del Rosario, Chínipas (27°23′39.9″N, 108°32′36.0″W, 469 m).

Aspidoscelis costata barrancarum (Zweifel). Chihuahua: 14138-95, 14241-2, Chínipas (27°23′39.9″N, 108°32′36.0″W, 469 m).

Aspidoscelis exsanguis (Lowe). Chihuahua: 14466-8, Cañón del Nido (29°30′23.0″N, 106°41′20.5″W, 2037 m); 14513, Cañón de la Tinaja (30°23′22.7″N, 108°17′30.0″W, 1746 m).

Aspidoscelis gularis (Baird and Girard). Coahuila: 13935-8, Gasolinera El Dorado, 2 km N Finisterre (25°59′46.4″N, 103°11′27.5″W, 1081 m.

Aspidoscelis m. marmorata (Baird and Girard). Coahuila: 13948-9, Dunas Magnéticas, Río Aguanaval (26°36′45.7″N, 103°7′29.0″W, 1072 m).

Aspidoscelis marmorata variolosa (Cope). Coahuila: 13917-9, Arroyo El Pajonal, Sierra de Tlahualilo (26°5′32.1″N, 103°19′26.0″W, 1103 m); 14074, Viesca, mpio Parras (26°20′10.9″N, 102°48′0.0″W, 1113 m).

Aspidoscelis tesselata (Say). Chihuahua: 13846, Cañón de San Carlos (29°10′52.6″N, 103°42′31.8″W, 673 m).

Aspidoscelis tigris aethiops (Cope). Sonora: 14265-308, 14389-14418, 14434-40, Ortiz (28°17′23.0″N, 119°43′0.8″W, 103 m).

Barisia levicollis (Stejneger). Chihuahua: 14497-502, crest of Sierra del Nido (29°30′23.3″N, 106°44′44.3″W, 2742 m). The 5 adults (111–142 mm SVL) are nearly uniform light to dark brown above; one has dim transverse darker marks across the dorsum. A series of diffuse, round light spots are along the granular lateral fold, spaced 1–2 dorsal or ventral scale rows apart. The ventral surfaces are unmarked or with scattered black flecks. Each has a regenerated tail.

The single juvenile, 49 mm SVL (tail complete, estimated at 65 mm) has no markings on the white venter. Along the middorsal line of the body is a series of 14 dark spots, mostly 1 scale long, 1–2 scales wide, becoming wider (up to 5 scales) posteriorly. About 15 irregular transverse dark lines one scale wide are on the 5-6 lateral scale rows on each side, each scale with a white posterior tip, collectively appearing as a white line bordering each dark line posteriorly.

One superciliary is present in all specimens, except for 2 on one side each of two specimens.

Callisaurus draconoides brevipes Bogert and Dorson. Sonora: 14252, 14255, 14259, 14381-4, Ortiz (28°17′23.0″N, 119°43′0.8″W, 103 m). The abdominal semeions are large in the 4 males, extending from axilla to near the groin; the throat is dark gray, without markings, and differ in these respects from the 69 mm (SVL) male reported from the same locality in Smith et al. (2005); however, they are larger (72–86 mm SVL).

Otherwise both sexes conform with the diagnostic features noted in Smith et al. (2005): females have a pink throat and very dim semeions, and the males all have a large pink area behind the axillary level and confluent with the semeions.

Coleonyx brevis Stejneger. Coahuila: 13509, Charcos de Risa (26°12′31.5″N, 103°6′12.2″W, 1096 m); 13908-10, Arroyo El Pajonal, Sierra de Tlahualilo (26°25′32.1″N, 103°19′26.0″W, 1103 m); 13971, Cueva del Tabaco (25°33′54.0″N, 103°5′47.0″W, 1560 m).

Cophosaurus texanus scitulus (Peters). Chihuahua: 13876-7, 13886, Río Bravo, Ejido San Carlos (29°10′2.6″N, 103°42′31.8″W, 673 m).

Crotaphytus collaris (Say). Chihuahua: 14058-60, Ejido Abrevadero, mpio Parras (25°24′15.8″N, 102°2′40.7″W, 1674 m). The two males are 74 and 84 mm SVL, the female 94 mm. All have numerous light dots, each covering several scales, over the dorsum. The collars are very narrow, the anterior one broken into several widely separated parts, the posterior one split medially. The center of the throat is gray in the males, lighter in the younger. Otherwise the ventral surfaces are white except for a few very faint gray spots.

Ctenosaura macrolopha Smith. Chihuahua: 14222-8, Chínipas (27°23′39.9″N, 108°32′9.7″W, 469 m). Sonora: 14335-9, Ortiz (28°17′23.0″N, 119°43′0.8″W, 103 m). The largest male is 158 mm SVL, the largest female 167 m. The smallest is 50 mm SVL.

Dipsosaurus dorsalis sonoriensis Allen. Sonora: 14309-34, 14344-70, 14419-26, Ortiz (28°17′23.0″N, 119°43′0.8″W, 103 m).

Eumeces brevirostris bilineatus Tanner. Chihuahua: 14478, Tomochi (28°21′38.7″N, 107°56′42.4″W, 1983 m).

Gambelia wislizenii (Baird and Girard). Chihuahua: 14521, Rancho El Parabien (31°36′46.2″N, 106°53′41.0″W, 1250 m).

Hemidactylus t. turcicus (Linnaeus). Coahuila: 13933, Arroyo El Pajonal, Sierra de Tlahualilo (26°5′32.1″N, 103°19′26.0″W, 1103 m).

Holbrookia approximans Baird. Chihuahua: 14470, Rancho El Nido (29°34′22.6″N, 106°39′28.7″W, 1718 m); 14522, Cañón de La Tinaja (30°23′22.7″N, 108°17′30.0″W, 1746 m).

Holbrookia elegans thermophila Barbour. Chihuahua: 14244, Chínipas (27°23′39.9″N, 108°32′36.0″W, 469 m). Sonora: 14255-9, 14285-8, 14429-30, Ortiz (28°17′23.0″N, 119°43′0.8″W, 103 m; 14458, Yécora (28°22′11.8″N,

108°55′42.8″W, 1615 m). All 7 females have a pink center of the throat, very bright in 1, bright in 4, and dim in 2; the abdominal semeions are diffuse, gray and small in all. In all males the abdominal semeions are broadly blue-enclosed.

Phrynosoma cornutum (Harlan). Coahuila: 13947, Río Aguanaval, Dunas Magnéticas (26°36′45.7″N, 103°7′29.0″W, 1072 m).

Phrynosoma solare Gray. Sonora: 14450-1, Ortiz (28°17′23.0″N, 119°43′0.8″W, 103 m).

Phyllodactylus tuberculosus saxatilis Dixon. Chihuahua: 14208, 14243, Chínipas, Iglesia Mesa del Rosario (27°23′39.9″N, 108°32′36.0″W, 469 m). Sonora: 14444-8, Ortiz (28°17′23.0″N, 119°43′0.8″W, 103 m). Those from Chihuahua have a very dim pattern, those from Sonora a bright pattern, probably reflecting whether preserved during the day or at night.

Sceloporus albiventris Smith. Chihuahua: 14196-200, 14202-7, 14452, Chínipas, road to El Limón (27°23′39.9″N, 108°32′35.0″W, 469 m). Eleven specimens have 3-3 femoral pores, one 2-3. There are no ventral markings or color. The largest male is 89 mm SVL, the largest females 94 mm.

Sceloporus c. clarkii Baird and Girard. Sonora: 14340-2, 14427-8, Ortiz (28°17′23.0″N, 119°43′0.8″W, 103 m).

Sceloporus edbelli Smith, Chiszar and Lemos-Espinal. Chihuahua: 14469, Rancho El Nido (29°34′12.6″N, 106°39′28.7″W, 1718 m).

Sceloporus goldmani Smith. Coahuila: 14066, Ejido La Casita, Sierra La Concordia (25°16′23.8″N, 101°25′53.3″W, 1778 m). This is an adult female, 52 mm SVL, with two postrostrals, the lateral scales in diagonal rows, 46 dorsals, no ventral markings, the light lateral stripe dim, the dorsolateral light lines one scale wide, separated from each other by 9 scale rows, 8 dorsolateral dark spots from neck to rump.

Sceloporus grammicus Wiegmann. Coahuila: 14038-48, ruins in Sierra La Concordia (25°9′41.0″N, 101°27′35.3″W, 2234 m); 14064-5, 14069, La Casita (Sierra La Concordia (25°16′23.8″N, 101°25′35.3″W, 2234 m). The largest of 7 males is 59 mm SVL, of 12 females, 64 mm. The nuchal tuft is absent or very faint, and the postcranial scales are little or not reduced in size.

Sceloporus jarrovii Cope. Chihuahua: 14508, crest of Sierra del Nido (29°30′23.3″N, 106°44′44.3″W, 2742 m); 14509-10, Cañón del Nido (29°29′41.2″N, 106°42′30.4″W, 2395 m). Sonora: 14461, Yécora (28°22′4.0″N, 108°53′32.6″W, 1545 m).

Sceloporus lemosespinali Lara-Góngora. Chihuahua: 14471, Tomochi (28°21′38.7″N, 107°56′12.4″W, 1983 m); 14505, Cañón del Nido (29°29′41.2″N, 106°42′30.4″W, 2395 m); 14506-7, crest of Sierra del Nido (29°30′23.3″N, 106°44′44.3″W, 2742 m).

Sceloporus magister bimaculosus Phelan and Brattstrom. Coahuila: 13906, Arroyo El Pajonal, Sierra de Tlahualilo (26°5′32.1″N, 103°19′26.0″W, 1103 m).

Sceloporus m. magister Hallowell. Sonora: 14343, Ortiz (28°17′23.0″N, 119°43′0.8″W, 103 m).

Sceloporus merriami australis Williams, Smith and Chrapliwy. Coahuila: 13950-65, 2 km W Punta Atalaya (26°47′0.5″N, 102°9′29.8″W, 794 m). The outstanding diagnostic characteristic of this subspecies is the low dorsal count; in the present series it varies 45–53 ($\bar{x}$ = 49, N = 16), as compared with 53–70 ($\bar{x}$ = 63, N = 83) in *S. m. merriami*, 47–62 ($\bar{x}$ = 53, N = 123) in *S. m. annulatus*, 47–60 ($\bar{x}$ = 55, N = 69) in *S. m. ballingeri*, 55–67 ($\bar{x}$ = 62, N = 32) in *S. m. sanojae*), and 58–67 ($\bar{x}$ = 61, N = 49) in *S. m. williamsi*. The labiomentals contact the first chinshield on only one side in 2 specimens. Other differences between the various subspecies exist in pattern.

In 12 females of this series, the prominent pattern consists of a dorsolateral series of ~9 round dark spots extending from neck to rump, and a similar, short series on the sides of the body, on a gray-brown background color. In the 4 males, this pattern is obscured by numerous white spots, much as in *S. m. sanojae*, intermixed with irregular dark markings, often transverse in position but corresponding to the dorsolateral series of round spots of females.

In all, dark blue gular bars extend completely across the under side of the head, narrowly broken medially in a few, but otherwise diagonal. The abdominal semeions in males are separated by several scale widths, and end posteriorly with a solid, dark blue area. No part of the abdominal semeions of the males is represented in the females, in which the venter is white. The tail bands are prominent both dorsally and ventrally in males, little or not evident ventrally in females.

The tail appears to be especially fragile in this subspecies; only one has a complete tail, and in the others it is either broken or regenerated.

Sceloporus merriami longipunctatus Olson. Chihuahua: 13847-59, Cañón de San Carlos (29°6′52.5″N, 103°55′37.6″W, 1200 m); 13878-85, Rio Bravo, Ejido San Carlos (29°10′52.6″N, 103°42′31.8″W, 673 m). These specimens are typical of the subspecies, and are within the known range of it. The adjacent subspecies are *S. m. annulatus* and *S. m. williamsi*. It differs from the former in having comma-shaped dorsal blotches (vs broad dark bands), caudal bands generally weak ventrally (vs bright), and the abdominal semeions generally separated medially (vs in contact). Females of *S. m. williamsi* lack gular semeions and an inguinal dark blotch (vs present), and in all specimens the paravertebral dark spots are small and rounded (vs comma-shaped), the labiomentals contact the 1st chinshield in 73% (vs 13%), and the dorsals are 58–66 (N = 11; 91% 60 or more) vs 49–60 (N = 37; 5% 60 or more).

Sceloporus nelsoni barrancarum Tanner and Robison. Chihuahua: 14201, Arroyo de Las Borregas, Chínipas (17°23′39.9″N, 108°32′36.0″W, 469 m).

Sceloporus oberon Smith and Brown. Coahuila: 14015, 14017-9, mountains W Gral. Cepeda (25°20′4.3″N, 101°26′17.6″W, 1580 m); 14050, 14052, road to La Casita

(25°16′36.4″N, 101°25′52.9″W, 1743 m). The adults are almost solid black; there is little evidence of the light borders on the collar. The juveniles are also very dark but have more light flecking than the adults.

Sceloporus parvus Smith. Coahuila: 14027, 14029, 14067-8, Ejido La Casita, Sierra La Concordia (25°16′23.8″N, 101°25′53.3″W, 1778 m). The largest male is 65 mm SVL, the female 66 mm.

Sceloporus p. poinsettii Baird and Girard. Coahuila: 13972-8, Ejido Abrevadero (25°24′15.8″N, 102°2′40.7″W, 1674 m); 14024-5, 14070-2, Ejido La Casita, Sierra La Concordia (25°16′23.8″N, 101°25′53.3″W, 1778 m); 14030, ruins in Sierra La Concordia (25°9′41.0″N, 102°27′35.3″W, 2234 m); 14090, La Virgen (25°13′5.8″N, 101°26′12.1″W, 2049 m); 14049, 14055, 4 km E La Casita (25°16′36.4″N, 101°25′52.9″W, 1742 m). The dorsals are 30–36 ($\bar{x}$ = 32.1, N = 27), as expected in this subspecies. The largest male is 123 mm SVL, female 111 mm; there are 7 juveniles, 33–50 mm SVL. All specimens at 70 mm SVL or greater have abdominal semeions (7 males, 12 females). The throat is blue in males. There are 5–6 transverse series of light spots on the dorsum, more nearly continuous in juveniles, less so in adults, some of which are nearly unicolor in both sexes. There are no longitudinal striae as in *S. p. polylepis*.

Sceloporus samcolemani Smith and Hall. Coahuila: 14028, ruins in Sierra La Concordia (25°9′41.0″N, 101°27′35.3″W, 2234 m.

Sceloporus slevini Smith. Chihuahua: 14511-2, crest of Sierra del Nido (29°30′23.3″N, 106°44′44.3″W, 2742 m).

Sceloporus undulatus speari Smith, Chiszar, Lemos-Espinal and Bell). Chihuahua: 14517-20, Rancho El Parabien (31°36′46.2″N, 106°53′41.0″W, 1250 m. Two adult females have faint gular semeions, the abdomen unmarked. All have uninterrupted dorsolateral and lateral light stripes. The paramedian dark spots are small, indistinct, and widely separated medially by 2 and 2 half-scale rows.

Sceloporus virgatus Smith. Sonora: 14457, 14460, Yécora (28°22′4.0″N, 108°55′39.9″W, 1545 m).

Uma exsul Schmidt and Bogert. Coahuila: 14075-89, Viesca (25°25′26.7″N, 102°53′40.2″W, 1115 m).

Urosaurus bicarinatus tuberculatus Schmidt. Chihuahua: 14209-120, Mesa del Rosario, Chínipas (27°23′39.9″N, 108°32′9.7″W, 469 m).

Urosaurus ornatus caeruleus Smith. Chihuahua: 13844-5, 13861, Cañón de San Carlos (29°10′52.6″N, 103°42′31.8″W, 805 m). An adult male, 44 mm SVL, has all ventral surfaces strongly pigmented—black on the chin and sides of the throat, center of throat and sides of abdomen axilla to groin blue, gular fold solid black; chest, a line down the middle of the abdomen, and the under sides of the limbs and tail black. The dorsum of body and limbs is brilliantly black, whitish cross-barred and spotted.

Another male, a little bit larger at 48 mm SVL, has no concentrated black ventral pigmentation (gray only), although the pattern is the same as in the former specimen. The dorsum is also less conspicuously marked, but with the same pattern.

In a female 47 mm SVL, the dorsal pattern is the same as in the males, but dim, and the ventral surfaces are unmarked except for a grayish under side of head.

These specimens appear to agree completely with *U. o. caeruleus*, although they are from near the supposed range of *U. o. schmidti* (Mittleman) in the Big Bend of Texas. The description of the latter's coloration and pattern is quite different from that represented by the present specimens.

The rather surprising difference in the intensity of coloration in the two males may be correlated with male dominance, numerous examples of which are known in this genus, *Uta* and *Sceloporus* (e.g., Roughgarden, 2005).

Urosaurus ornatus schottii (Baird). Sonora: 14260-4, 14371-80, 14431-3, Ortiz (28°17′23.9″N, 110°43′0.8″W, 103 m). There are usually two rows of enlarged scales on each side of the vertebral series, unlike *U. o. lateralis* (Boulenger) with usually just one.

Uta stansburians stejnegeri Schmidt. Coahuila: 13888-905, 13921-4, Arroyo El Pajonal, Sierra de Tlahualilo (26°5′32.1″N, 103°19′26.0″W, 1103 m); 14073, Viesca (25°25′26.7″N, 102°53′40.2″W, 1115 m). Only two adults, 47 and 50 mm SVL, are present in the entire series of 23 specimens; all others are 26–34 mm SVL. The disparity suggests a rapid turnover in populations of this species.

Snakes

Arizona elegans elegans Kennicott. Coahuila: 13999, Ejido Abrevadero (25°24′15.8″N, 102°2′40.7″W, 1674 m). The midbody scale rows are 29. The locality is within the known range of the subspecies.

Arizona elegans expolita Klauber. Coahuila: 13927, Arroyo El Pajonal, Sierra de Tlahualilo (26°5′32.1″N, 103°19′26.0″W, 1103 M); 13969, Cueva del Tabaco 25°33′54.0″N, 103°5′47.0″W, 1560 m). The midbody scale rows are 25 in both. The localities are within the known range of the subspecies, although it is known only a short distance into southwestern Coahuila from the west.

Crotalus atrox Baird and Girard. Coahuila: 13913, 13931-2, Arroyo El Pajonal, Sierra de Tlahualilo (26°5′32.1″N, 103°19′26.0″W, 1105 m); 14000, Ejido Abrevadero, mpio Parras (25°24′15.8″N, 102°2′40.7″W, 1674 m). Sonora: 14443, Ortiz (28°17′23.0″N, 119°43′0.8″W, 103 m). Nos. 13913, 13931-2, taken July 16-17, are neonates, with a single button and no additional segment in the rattle.

Crotalus basiliscus (Cope). Chihuahua: 14112, Chínipas (27°23′39.9″N, 108°32′9.7″W, 469 m).

Crotalus lepidus klauberi Gloyd. Chihuahua: 14462, 14472, 14475-6, Tomochi (28°21′38.7″N, 107°56′12.4″W, 1983 m). These four specimens vary in pattern from the extremes of simplicity and complexity illustrated by Campbell and Lamar (2004, pls. 848, 852).

Crotalus molossus nigrescens Gloyd. Chihuahua: 14459

(head only), mpio Temosachic (28°25′57.0″N, 108°29′37.9″W, 1615 m); 14474, Cañón del Nido (29°30′22.6″N, 106°41′20.5″W, 2070 m). As argued in Lemos-Espinal et al. (2004), we regard the pattern as the defining characteristic for *C. m. molossus* and *C. m. nigrescens*. These specimens conform fully with the character states of the latter subspecies.

Crotalus p. pricei Van Denburgh. Chihuahua: 14492, Cañón del Nido (29°29′41.2″N, 106°42′30.4″W, 2395 m); 14493-4, crest of Sierra del Nido (29°29′37.7″N, 106°43′21.8″W, 2817 m). The paired dorsal spots are prominent in 2, dim in the largest (580 mm SVL).

Crotalus s. scutulatus (Kennicott). Chihuahua: 14495, Rancho El Nido (29°34′22.6″N, 106°39′28.7″W, 1741 m). Coahuila: 13911, 13915, 13928-30, Arroyo El Pajonal, Sierra de Tlahualilo (26°5′32.1″N, 103°19′26.0″W, 1103 m); 13945-6, Dunas Magnéticas, Río Aguanaval (26°36′45.7″N, 103°7′29.0″W, 1072 m). There is a minimum of 2 scales in one row between the supraoculars except in 1 with 3, but in that exception the rest of the dorsal head scales conform with expectation for the species, including a large postsupraocular.

Crotalus willardi amabilis Anderson. Chihuahua: 14490-1, crest of Sierra del Nido (29°29′37.7″N, 106°43′21.8″W, 2550 m). The larger is 495 mm TTL, and contained a rodent at least twice the normal diameter of the body. The dark dorsal blotches on body are 37 and 41, and 4 are on the tail anterior to the longitudinal stripes. The light interspaces are brighter and the spots darker posteriorly; seven blotches near midbody are divided in one. The blotches are no darker at their anterior and posterior edges than elsewhere. The under side of the tail is dark, and the light areas near the rear of the dorsum are also slightly reddish.

Crotalus willardi silus Klauber. Sonora: 14454, Yécora (28°22′17.8″N, 108°55′42.8″W, 1545 m). The specimen is a DOR and half of the body is missing.

Diadophis punctatus dugesii Villada. Chihuahua: 14099, nr km 131, hwy 25 (27°29′38.6″N, 107°30′36.1″W, 2028 m). A bright yellow neck ring is present, covering 2 scale lengths, the posterior scale rows are 15, the temporals are 1-2, and the ventrals are 218 (male). The presence of a neck ring and low ventral counts conform with the character-states of other west-slope specimens (Tanner, 1985; Smith et al., 2005), all referred to this subspecies.

Drymarchon melanurus rubidus Smith. Chihuahua: 14236-9, Chínipas (27°23′39.9″N, 108°32′9.7″W, 469 m).

Gyalopion quadrangulare (Günther). Chihuahua: 14137, Chínipas (27°23′39.9″N, 108°32′9.7″W, 469 m). This is a badly dehydrated specimen 99 mm TTL. The anal is entire, and 38 blotches are present on the body. This is the first specimen recorded of the species from Chihuahua.

Heterodon kennerlyi Kennicott. Chihuahua: 14471, Rancho El Nido (29°34′22.6″N, 106°39′28.7″W, 1718 m). Coahuila: 13925, Arroyo Pajonal, Sierra de Tlahualilo (26°5′32.1″N, 103°19′26.0″W, 1103 m). The diagnostic scalation is typical, with the azygous scales 1 and 4, the loreals 1-1 in each.

Hypsiglena ochrorhyncha chlorophaea Cope. Chihuahua: 14108, Chínipas (27°23′39.9″N, 108°32′9.7″W, 469 m). Coahuila: 13914, Arroyo Pajonal, Sierra de Tlahualilo (26°5′32.1″N, 103°19′26.0″W, 1103 m). The specimen from Coahuila is a little lighter than the one from Chihuahua and has 55 dorsal blotches on body, none reaching the ventrals. The specimen from Chihuahua has 78 dorsal blotches that extend onto the lateral 1/6 on the sides of the ventrals, leaving a light central area down the middle of the abdomen. The former is from the range of *H. o. janii* (Dugès) as interpreted by Dixon and Dean (1986), but we regard the eastern and western populations as indistinguishable taxonomically (Smith et al., 2005).

Hypsiglena torquata Günther. Chihuahua: 14229, 14240, Chínipas (27°33′39.9″N, 108°32′9.7″W, 469 m). These are clearly distinguishable from *H. o. chlorophaea* from the same locality, on the basis of the presence of a nuchal collar distinctly lighter than the ground color of the rest of the body and of the head.

Imantodes gemmistratus latistratus Zweifel. Chihuahua: 14134, above Guamuchil (27°23′21.9″N, 108°29′5.5″W, 410 m). The pattern is the same as illustrated in Zweifel (1959); the anterior 4 blotches are all 2 or more times the length of their interspaces. This is the first recorded specimen of the species from Chihuahua.

Lampropeltis knoblochi Taylor. Chihuahua: 14251, nr Basaseachic (28°20′45.4″N, 108°15′54.9″W, 1904 m). The body has 57 red blotches, all ending on scale rows 2 or 3, where they mostly alternate with small, irregular, black-edged blotches that fade toward mid-abdomen. Neither the 14 red bands nor their black borders encircle the tail; most of the borders close off the red blotches on the lowermost scale row. One or two small squarish black abdominal marks are on about a third of the ventrals. The snout is whitish; most of the rest of the top of the head is reddish, black-edged.

Lampropeltis pyromelana (Cope). Chihuahua: 14464, Cañón del Nido (29°30′23.0″N, 106°41′20.5″W, 2037 m). The body has 45 red bands, the tail 12. Most extend onto the ends of the ventrals, and those on the tail completely encircle it. The angular black marks on the ventral surface of the body are numerous, at least one on about half of the ventrals, and many of those cover over half of a ventral; black marks are virtually absent under the tail. The snout is whitish; between eye level and the rear of the parietals the rest of the dorsal surface is black enclosing several irregular reddish areas.

Leptotyphlops dugesii (Bocourt). Chihuahua: 14135-6, Barrio de La Loma, Chínipas (27°23′39.9″N, 108°32′9.7″W, 469 m). These agree with the specimens from the same area reported in Lemos-Espinal et al. (2004). The taxon was regarded as a species in the latter work.

Masticophis bilineatus Jan. Chihuahua: 14106-7, 14449, Chínipas (27°23′39.9″N, 108°32′9.7″W, 469 m).

Masticophis flagellum cingulum Lowe and Woodin. Sonora: 14441-2, 14444, Ortiz (28°17′23.9″N, 110°43′0.8″W, 103 m); 14455, nr Hermosillo (28°51′46.2″N,

110°43′40.8″W, 333 m). The latter specimen is a juvenile, 797 mm TTL, tail 200 mm. It is considerably different in markings from the others, all subadults or adults, and is heavily pigmented above and below. Numerous narrow (1–2 scale lengths), irregular dark crossbands are separated by longer light interspaces (~2 scale lengths) and become indistinguishable in the preanal area and on tail. All dorsal scales except those in the crossbands have a wide, longitudinal central dark streak, the lateral edges lighter, forming dark line down each scale row, especially prominent on the lower 2 scale rows. The lateral edges of all ventrals and subcaudals are very dark; the area between is lighter but more densely pigmented anteriorly than posteriorly. A narrow light line separates the lateral and medial dark areas on the abdomen, but is indistinct on the posterior third. The tail is white below except for the dark lateral edges of the subcaudals. The top of the head is dark, but the upper preocular and lower edges of the supralabials are whitish. The underside of the head is white with a black spot on most scales.

In the other specimens, the venter is mostly black, lighter under the tail; the under side of the head is brightly spotted, as in the juvenile. The narrow crossbands of the juvenile are replaced by long, dark crossbands separated by narrower light areas retaining much of the juvenile pattern.

Masticophis flagellum lineatulus Smith. Chihuahua: 14524, Rancho La Providencia (29°40′22.3″N, 106°37′4.4″W, 1569 m). Coahuila: 13920, Arroyo El Pajonal, Sierra de Tlahualilo (26°5′32.1″N, 103°19′26.0″W, 1103 m). These are spotted juveniles too small (369, 371 mm TTL) to show pattern or salmon color, but they have the light, black-bordered neck ring of this subspecies.

Masticophis mentovarius striolatus (Mertens). Chihuahua: 14100-5, Chínipas (27°23′39.9″N, 108°32′9.7″W, 469 m). This series is surprisingly uniform in coloration, from the smallest juvenile (792 mm TTL) to the large adults. The dorsal ground color is a light bluish gray, with a dark (very dark in the young, brown in subadults and adults, darkest anteriorly in both) anterior tip of each dorsal scale. The head is uniform brown above and on sides except much lighter on the supralabials, the posterior edges of which are dark.

In the two smallest males (548 and 563 mm SVL) the contrast between light and dark is prominent in the supralabial region. Narrow light bars, less than 1 scale length and separated from each other by about 3 scale lengths, cross the dorsum and sides of the neck for about 2–3 head lengths behind the head. In the smallest, the crosslines extend onto the rear of the head. Larger specimens, over 602 mm SVL (862 mm TTL), lack the light crosslines completely.

In both juveniles and adults the ventral surfaces of head, body and tail are unmarked but the posterior part of the abdomen is light orange, brighter under the tail.

Mastigodryas cliftoni (Hardy). Chihuahua: 14111, Chínipas (27°23′39.9″N, 108°32′9.7″W, 469 m). This is the third specimen recorded from the state. Its basic pattern is much as described in Lemos-Espinal et al. (2004) for specimens from the same locality. The anterior blotches are dark brown with a reddish tinge, and the interspaces are light blue. The dorsal surfaces of the body and tail are black, extending onto the lateral edges of the ventrals and subcaudals, where there is a lengthwise, rounded keel. The lower 1–2 scale rows anteriorly are gray-brown. Almost all of the ventral surfaces of the head and body are bright salmon, which fades posteriorly on the abdomen and tail.

Micruroides euryxanthus australis Zweifel and Norris. Chihuahua: 14123, 14133, Chínipas (27°23′39.9″N, 108°32′9.7″W, 469 m). These are the 3rd and 4th specimens known from the state. No. 14133 is unusual in having the yellow rings ending on scale rows 2–3, completely absent ventrally. They encircle the whole body in No. 14123.

Oxybelis aeneus (Wagler). Chihuahua: 14234, Chínipas (27°23′39.9″N, 108°32′9.7″W, 469 m).

Pantherophis emoryi meahllmorum (Smith, Chiszar, Staley and Tepedelen). Coahuila: 14063, Gral. Cepeda (25°22′36.4″N, 101°28′40.0″W, 1456 m); 14091, nr Presa Guadalupe (25°20′24.8″N, 101°38′19.6″W, 1596 m). Both are males. Respectively the blotches on body and tail are 40, 29 and 18, 19; subcaudals 72, 76; ventrals 212, 208.

All specimens recorded by Smith et al. (1994) and Vaughan et al. (1996) from Coahuila were referred to this subspecies, with which the present specimens agree under the criteria of those two works. The pertinent taxonomic situation is discussed in Lemos-Espinal et al. (2004).

Pituophis catenifer affinis (Hallowell). Chihuahua: 14524, Cañón de La Tinaja (30°23′22.7″N, 108°17′30.0″W, 1746 m; 14527, same locality, 1510 m). Coahuila: 13970, Cueva del Tabaco (25°33′54.0″N, 105°5′47.0″W, 1133 m); 13997, nr Abrevadero (25°24′15.8″N, 102°2′40.7″W, 1674 m).

Pituophis d. deppei (Duméril). Sonora: 14453, Yécora (28°22′4.0″N, 108°55′32.6″W, 1545 m). This specimen is aberrant in having 4 prefrontals, as in *P. catenifer*, rather than the usual pair. However, the pattern is typical of *P. deppei*. There are 30 blotches on body, very dark, almost black, much as on the tail. The median lengths of blotches 2–5 are 9, 7, 7, 8 scales, almost twice the length of the equivalent ones of *P. catenifer*. The blotches are also of a uniform shade head to tail (vs lighter anteriorly than posteriorly).

Procinura aemula Cope. Chihuahua: 14113-22, 14114-32, 14465, Chínipas (27°23′39.9″N, 108°32′9.7″W, 469 m). Two specimens have 3 sets of equidistant triads on body, one on tail—a variant not reported in Lemos-Espinal et al. (2004). The variation otherwise is within known limits.

Rhinocheilus lecontei tessellatus Garman. Coahuila: 13967-8, Cueva del Tabaco (25°33′54.0″N, 105°5′47.0″W, 1133 m); 13998, Abrevadero (25°24′15.8″N, 102°2′40.7″W, 1674 m). The rostral is enlarged and protuberant in all.

A recent, most admirably sophisticated statistical analysis of variation in external morphology in this formerly monotypic genus (Manier, 2004) concluded that the only subspecies acceptable, other than the nominotypical one, is on Isla Cerralvo, Baja California; all others were regarded as inacceptable.

On the other hand, the specimens from eastern Chihuahua that we regard as *R. l. tessellatus* were analyzed with others from Pacific slopes, including the tropical *R. l. antonii*, which we regard as a species, as well as others from the deserts of Sonora where *R. l. lecontei* occurs (see Lemos-Espinal et al., 2004, and Smith et al., 2005).

Manier's study was based on external morphology, and her conclusions were therefore independent of a DNA database which some proponents of subspecies-recognition regard as unreliable in that context. Her conclusions were therefore regarded as morphologically unassailable. Because of her obvious misidentifications, however, we do not agree, and continue to recognize *R. l. tessellatus*. The statement was made that no geographically consistent difference in rostral shape (that in part distinguishes *R. l. lecontei* from *R. l. tessellatus*) exists, but supportive data are not evident. Much emphasis was placed on sexual dimorphism in the genus, as demonstrated, but that has long been known and its absence morphologically (although not in color and pattern) would be more unusual than its presence.

Salvadora deserticola Schmidt. Chihuahua: 14110, 14233, Chínipas (27°23′39.9″N, 108°32′9.7″W, 469 m); 14526, Cañón de La Tinaja (30°23′22.7″N, 108°17′30.0″W, 1746 m). These appear typical; the edges of the dark lines are serrate, as reported by Smith et al. (2005).

Sympholis lippiens rectilimbus Hensley. Chihuahua: 14231, Chínipas (27°23′39.9″N, 108°32′9.7″W, 469 m). As in other examples of the species, the rear edge of the black cap is straight across the head. As noted by Lemos-Espinal and Smith (forthcoming), there is no firm evidence that this subspecies is not valid.

Thamnophis cyrtopsis collaris (Jan). Chihuahua: 14106, 14230, 14235, Chínipas (27°23′39.9″N, 108°32′9.7″W, 469 m).

Thamnophis c. cyrtopsis (Kennicott). Chihuahua: 14246, nr km 131, hwy 25 (27°29′38.6″N, 107°30′36.1″W, 2028 m); 14463, 14479, Tomochi (28°21′38.7″N, 107°56′12.4″W, 1983 m); 14496, crest of Sierra del Nido (29°30′23.3″N, 106°44′44.3″W, 2742 m); 14516, 14523, Cañón de La Tinaja (30°23′22.7″N, 108°17′30.0″W, 1746 m). Coahuila: 14204-7, betw Parras and Gral. Cepeda (25°19′41.8″N, 101°41′5.7″W, 1634 m). Sonora: 14456, Yécora (28°22′17.8″N, 108°55′42.8″W, 1545 m).

Thamnophis m. marcianus (Baird and Girard). Coahuila: 13966, Charcos de Risa (26°13′32.7″N, 103°6′24.0″W, 1114 m).

Acknowledgments

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Book Review: *Snakes of New England: Photographic and Natural History Study* by Linda Krulikowski. 2004. xi + 308 pp. LuvLife Publishing, Old Lyme, CT. ISBN 0-9764316-0-2. Softbound. $42.45

Available in the U.S. for $45 postpaid from LuvLife Publishing, 69 Shore Dr., Old Lyme, CT 06371.

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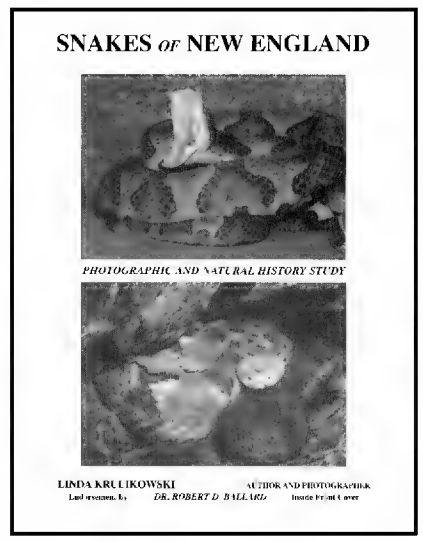

Anyone viewing the cover will immediately be attracted to this highly illustrated regional herpetofauna book. The cover photographs show a northern copperhead (*Agkistrodon contortrix mokasen*) in striking posture and a beautiful yellow phase timber rattlesnake (*Crotalus horridus*) at a den site in the Mesonic Mountain Range in Connecticut.

Some herpetologists might question the value of the book, never having heard of the author, but Linda Krulikowski has spent the past 25 years studying and photographing these creatures throughout the eastern United States. Linda has a degree in biology from Southern Connecticut State University, and had her first published photographic experience while working in cancer research at Yale University. She has published photography extensively for the State Museum of Natural History; most recently her work has appeared in *The Snake Almanac* by Ed Ricciuti (2001).

Linda recruited children between the ages of 8 and 15 who shared her interest and fascination for snakes to catch them for photographic purposes. She has dedicated this book to them and her son Ernie, among others.

Chapter one provides a general description of snake anatomy, with sections on sense organs, including the eyes and the sensory pit organ, and a brief section on breathing in snakes.

Chapter two discusses behavior including comments on feeding, body temperature regulation (thermoregulation), hibernation, reproduction, locomotion, climbing ability, and defensive behavior.

Chapter three covers venomous snakes and snakebite, with comments on venom properties, toxicity, fang structure, venom apparatus, and venom delivery. The snakebite portion treats snakebite history, symptoms of envenomation, first aid and treatment, and provides an excellent review of historical treatment methods. This is followed by venom yields in New England pitvipers, deaths in the United States from pitviper envenomation, recommended first aid treatment, and comments on preventing snakebite.

It is noteworthy that all sections of the book are highly illustrated with exceptional photographs.

Chapter four provides an excellent and highly interesting review of mythology and folklore relating to North American snakes, covering such topics as: hoop snakes with stingers, snakes are cold and slimy, charming prey, triangular heads, hooded snakes, injured snakes die just before sundown, snake odors, chasing people, swallowing young, sucking milk, venomous snakes mating with nonvenomous snakes, number of rattles tells the age of rattlesnakes, buddy system, fang-in-boot tale, snakes in sleeping bags, protective hair rope, snakes' tongues are dangerous, venomous breath, glass snakes, spitting snakes, the Hopi snake dance and much more.

According to Chinese folklore the snake was a symbol of longevity, wisdom and flexibility. The Year of the Snake follows the Year of the Dragon in the 12-year cycle, and Chinese astrologers characterize individuals born in snake years as "cerebral, seductive, cultivated, vain and unfaithful, with a talent for making money and a reluctance to share it." Interestingly, the author points out, Aristotle Onassis and Howard Hughes were born under the sign.

Chapter five gives a short review of snake classification, along with a checklist of the 16 snakes presently found in New England (*Carphophis a. amoenus*, *Coluber constrictor*, *Diadophis punctatus edwardsi*, *Elaphe o. obsoleta*, *Heterodon platirhinos*, *Lampropeltis t. triangulum*, *Liochlorophis v. vernalis*, *Nerodia s. sipedon*, *Storeria d. dekayi*, *S. o. occipitomaculata*, *Thamnophis s. sauritus*, *T. sauritus septentrionalis*, *T. s. sirtalis*, *T. sirtalis pallidus* [sic, should have been *pallidulus*], *Agkistrodon contortrix mokeson* [sic, should have been *mokasen*] and *Crotalus horridus*). This is compared with a list compiled in 1904 showing 17 species.

Chapter six contains color photographs each New England species along with a dichotomous key to those species. Chapter seven is a short description of the family Colubridae. Chapter 20 similarly describes the family Viperidae.

Chapters eight through 19 are individual colubrid species accounts with the first, covering *Thamnophis s. sirtalis*, dedicated to a budding herpetologist, Wyatt Lee Frantz, who was dramatically taken from this world at age seven. Chapters 21 and 22 provide accounts for the northern copperhead and the timber rattlesnake.

Each species account provides a detailed description. Topics covered in the accounts include sexual dimorphism, head scalation, range, habitat, behavior, reproduction, feeding and diet, predators and defensive behavior, common names, and remarks on similar species.

Following the species accounts are appendices dealing with head scale pattern for the timber rattlesnake, radiotelemetry

studies, captive care, range maps, and rehabilitation centers, followed by a glossary of terms, short bibliography and an index.

The photographs alone will make this book a classic in the field of herpetology for years to come. Each individual species account can include up to 25 individual color photographs portraying color variation, defensive and foraging behaviors, mating behavior, and neonates. The 14 individual species accounts cover some 190 pages. The author and her four musketeers should be commended for this outstanding achievement, which took 30 years to complete.

We certainly recommend this book for anyone interested in not only the herpetofauna of Eastern United States, but every herpetologist throughout North America, as it's well worth twice its current price.

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HerPET-POURRI

by Ellin Beltz

New Ozzie Word

Reviewing a new dictionary of Australian slang, the reviewer wrote, "And if you want to include plays on road rage, what of toad rage? Why is there no mention of this common term to describe the fury of tropical householders fighting off cane toads? Is it because the dictionary compilers live on this island's temperate shore?" [*The Australian Age*, November 5, 2005, from Eric Schmidt]

Still stupid after all these years

Northern Territory News, reported from Australia: "Some juveniles and young adults in Katherine and Arnhem Land are even drying out the skins of cane toads and rolling them up as joints to get a hit. But Territory health authorities have warned that those who lick or smoke cane toads are dicing with death and stress that there are no hallucinogenic effects possible from bufotoxin, the toxin excreted by the introduced pest." [September 28, 2005 from Ms. G. E. Chow] Even so, there are no reports of death or injury due to bufotoxin. The only person reportedly "stoned" on toad may just as likely have been drinking homemade hooch and the whole story hopped around the world with more legs than it deserved. If you've ever tried to dry out a toad skin, you know it's a lot harder than the news reports would have you believe. Do not put live or dead toads in ovens. Do not put toads in microwaves. Do not hold toads in front of car defoggers on rainy nights. And do not email me for any other details.

Dodging another bullet

On the third day of a volcanic eruption on 4,920-foot-tall Sierra Negra in the Galapagos Islands, officials stressed that the tourist magnet's famous wildlife was definitely not at risk. Three spectacular rivers of lava flowed down the northeast slopes of the mountain, an area not used by animals. [Associated Press, October 25, 2005, from Bill Burnett]

Envenomations this month

• A Florida fire marshal shot a five-foot-long rattlesnake "multiple times, . . . thought it was close to death, . . . reached out to grab the snake . . . and . . . was bitten on his right hand." The man was taken to intensive care where he died despite the administration of 18 vials of antivenin. [*Orlando Sentinel*, October 11, 2005, from Bill Burnett]

• A life-long Florida City snake keeper said that "he'd been bitten so many times, by so many snakes, he thought he was immune," according to the *Miami Herald* [September 17, 2005, from Alan Rigerman]. He kept cleaning cages at Everglades Outpost until the owner insisted on taking him to the hospital where he remained in the intensive care unit after receiving 20 vials of antivenin. Albert Killian received his first snakebite at 11 years old, and had collected more than 1,200 snakes by the time he could vote. Since then his life has been catching, caring for, and giving presentations about snakes. Incidentally, the last time anyone was bitten at the Outpost, which houses animals taken and turned in as well as collected, it was Mr. Killian.

Florida—the Exotic Battleground State

• A Miami-Dade homeowner and his friend captured a 10-foot Burmese python in the homeowner's yard. They discovered the snake because they'd staked out his fish pond after his prize exotic fish kept vanishing. The capture was filmed by a local television station and hence the story gained legs even though the snake, of course, has none. [*Miami Herald*, October 19, 2005, from Alan Rigerman]

• Meanwhile a family in Miami lost their pet cat to a 12-foot python recently. They know for sure because the dead python was x-rayed and a cat clearly showed on the film. It was, of course, the lead story that night on the news. [*Miami Herald*, October 23, 2005, from Alan Rigerman]

• Newspaper readers wrote in about the sudden attention being paid to pythons after the cat got eaten. One wrote: "The question is, who owned this snake and let it go? That irresponsible person should pay for a new cat and the time spent by the Miami-Dade Fire Rescue people trying to catch the reptile." Another added: "My condolences to the owners whose pet was eaten by a snake that has no business in Florida." [*Miami Herald*, October 11, 2005, from Alan Rigerman; also the *Honolulu Advertiser*, October 16, 2005, from Ms. G. E. Chow]

• One writer suggested putting microchips in every single imported exotic animal, which could lead to a registration system to attribute responsibility for releases. [*Miami Herald*, October 17, 2005, from Alan Rigerman]. The problem is now with native-bred non-native animals; there's no way to tag their offspring.

• Another suggested "why not initiate a python roundup event? Prizes could be given for catching the most, and a special prize for the largest." The writer goes on to cite the western rattlesnake roundups as a model for his proposed event. [South Florida *Sun-Sentinel*, October 16, 2005, from Alan Rigerman] I can just see it now, thousands of tourists wrestling giant pythons all over Florida. The liability risk alone is mind-boggling.

• "Experts estimate that nearly 400 non-native species of mammals, reptiles and fish have invaded [Florida], many in the past 20 years. . . . At least 125 of those have established themselves as permanent residents. . . . From giant Burmese pythons to 9-pound African rats, Florida is teeming with exotic critters that have no business being here. . . . And once they make themselves at home, they often can cause havoc," according to the *Orlando Sentinel* [October 17, 2005, from Bill Burnett]. Burmese pythons are reportedly breeding in the wild and eating native animals as well as challenging the panther and alligator for the real title "king of the Everglades." The list of species illegally released includes dozens of non-native fish species, 48 species of reptiles, 33 species of mammals and four species of amphibians. An "amnesty day" is planned in Orlando next spring in the hopes that people who no longer wish their scaly pets will turn them in, no questions asked.

• In a front page story, lots of facts and figures about the Burmese python invasion were presented including "between 1979 and 2000, only a dozen [pythons] were documented in the wild in south Florida. In the five years since, 236 have been found . . . and an established reptile invader has never been wiped out. . . . The U.S. government spent several years and $50 million to remove the brown tree snake from . . . Guam, where it was accidentally introduced decades ago with devastating effects. . . ." [*Miami Herald*, October 17, 2005, from Alan Rigerman]

Still more Florida exotics

• And when they run out of snakes, gators step in to fill the news. The *Orlando Sentinel* [October 7, 2005, from Bill Burnett] reports: "A Palm Bay woman who fed an alligator bread learned why that's both unwise and illegal." She was bitten on the hand and written up by wildlife officers. The woman insisted the alligator didn't attack her, it was just trying to take bread out of her hand because she'd tossed it a couple of pieces already. The woman also expressed remorse that the alligator would have to be put down.

• Cape Coral, Florida, has a population of nearly 1,000 Nile monitor lizards even though officials have been officially eradicating the lizards for two years. Each female can lay 80 or so eggs at a time. Once grown to their full 7-foot size, they climb, swim and run as fast as 18 miles per hour. People have reported monitors on their roofs; the pests apparently don't see "house," rather "cliff" with a nice basking spot on top. Officials now worry the monitors will find the offshore bird rookeries within the 6,000-acre federal wildlife refuge. [*Orlando Sentinel*, October 10, 2005, from Ray Boldt]

Offshore ecosystem trashed too

One of the largest algal blooms called a "red tide" has been perched offshore Florida's Gulf Coast for months. The highest risk has been around Destin and Panama City on the Panhandle and Sarasota on the peninsula where humans can experience respiratory effects, fish die and the water is a strange red-brown color. "The algae (*Karenia brevis*) produce potent neurotoxins that can be deadly to fish . . . [which by eating shellfish can] accumulate red-tide toxins in their tissues, making them unsafe to eat," according to the *Orlando Sentinel* [October 16, 2005, from Bill Burnett] Possible causes of the tides include pollution, Florida's explosive growth and concomitant releases of chemicals into the waterways. Meanwhile, tourists have avoided the area and local businesses are suffering. After 30 column inches of problems for humans, the report points out that "[the red tide has killed] tens of thousands of fish, crabs, birds and other small creatures . . . 66 manatees . . . 34 dolphins and . . . almost 180 sea turtles." Total space devoted to the impact of this event of nature? Two inches.

"Frogs" on Stamps!

Kermit the Frog turned 50 this year and his likeness now graces a U.S. postage stamp along with creator, the late Jim Henson. Miss Piggy, the Swedish Chef, and Dr. Bunson Honeydew and his assistant, Beaker, are honored on the new 37-cent stamps. [Associated Press, September 29, 2005, from Ms. G. E. Chow]

Toxic snappers

The interesting factoid that South Korea alone imports 220 tons of snapping turtle while raising another 135 tons per year is of only the most marginal interest, until recent reports that fish and turtle farmers are using illegal toxic chemicals as part of the raising process. The government, understandably upset, closed a few of the worst offenders and has ordered testing of the rest. Snapping turtles are served for food in much of Asia where they are regarded as effective in boosting stamina. [*Joongang Daily*, South Korea, September 26, 2005, from Allen Salzberg and several other articles from Wes von Papineäu] Just where 220 tons of snapping turtle gets collected and the environmental effects thereof beggars the imagination.

Hopping to help

Twenty-eight oversized leaping ceramic frogs were decorated by local artists and auctioned off at a dinner in Angels Camp, California, the home of the "Celebrated Jumping Frog of Calaveras County." More than one hundred thirty thousand dollars was raised for local charities. [*MotherLode*, October 23, 2005]

Coming soon to a pond near you

A population of non-native tiger salamanders, probably introduced from bait buckets, crawled out of Tom Sawyer Lake near Golden Hills, California, and crawled through the sub-

division until a biologist from Cal State Bakersville came out for a look. A genetic analysis at University of California at Berkeley revealed these weren't the native species, California tiger salamanders, but another genetic morph usually sold for bait. Locals are being asked not to translocate the animals to other ponds. [*Tehachapi News*, October 5, 2005, from Ms. G. E. Chow and Wes von Papineäu] Watch this space. These salamanders have legs and will travel if not eliminated. It's only eighty miles to the nearest California tiger salamanders. I give them ten years, if that.

Sewer Man and the Flush

A 10-foot-long boa constrictor lived in the sewer pipes of an English apartment building for three months since its owner was evicted for non-payment. According to the *Manchester Guardian* [October 17, 2005, from Ms. G. E. Chow]: "It has been slithering out of toilet bowls throughout the flats in Manchester since August. . . . The creature has been spotted on several occasions and homeowners have put bricks on toilet seats in a bid to keep the beast from popping out of the pan. Previous sightings of the animal were treated with skepticism but firefighters were called to the block of flats . . . after [the snake] confronted a resident going to the toilet in the middle of the night." Fiber optics couldn't find it but another resident found it in the middle of the bathroom floor and trapped it in a tub. The paper concluded: "A spokesman for the Royal Society for the Protection of Animals said it was not uncommon for snakes to be found in household sewage pipes..., [he said] ` It would have no problem traveling up and down the waste pipe and has probably been eating rats from the sewer.'"

Just buy a screen top!

A 2-foot-long Chinese giant salamander (*Andrias davidianus*) was found wandering around on a street in the Japanese city of Kawasaki after heavy rains. Police returned the animal to its owner who said it was lost after rains filled up its enclosure and permitted the animal to swim away from the second floor veranda of his house. Japanese giant salamanders are considered "living treasures" and cannot be owned as pets. Meanwhile in Yokohama, police received [an 18-inch] . . . iguana as a lost and found item when a citizen found it munching away in his garden. Police said they are looking for its owner. [*Daily Yomuri Shinbun*, October 10, 2005, from Eric Schmidt]

It was a very bad year

Florida researchers feel this year's "Sea turtle season [was] a disaster." According to the Venice *Gondolier Sun* [November 6, 2005], "Southwest Florida is wrapping up its latest sea turtle-nesting season—the worst for some beaches in recent history—during which beach renourishment projects, disorientations, storms and even a coyote devastated nests and newborn turtles. . . . Beaches that previously saw 100–150 sea turtle nests failed to produce a single hatchling this year. . . . Hurricane Dennis, which brushed the area in June, ate large chunks of Manasota Key's beach, taking newly laid nests with it. . . . Sea turtles that came ashore afterward were forced to lay nests on a narrow beach, which later got larger with additional sand brought up from at least two major storms. . . . [Meanwhile] Sarasota County Environmental Services said the county tallied about 1,200 nests this year, down nearly 70 nests from 2004. The county also reported 700 disorientations, in which baby sea turtles likely followed artificial light and crawled away from the water. . . . Beach renourishment projects in Venice, a coyote on Caspersen Beach and red tide throughout the Gulf took a toll on both adult and baby turtles. More than 130 sea turtles have been killed by red tide since June, Mote Marine Laboratory reported. In addition, an adult turtle was run over on Longboat Key after it became disoriented and wandered onto the road, and a turtle was killed by a dredging boat in Venice." Meanwhile local homeowners had 95 percent compliance with lights-out and no junk on beaches laws, and no one has been complaining either.

Thanks to everyone who contributed this month and to all of you who are going to send more clippings for a very skinny clippings file folder. Send full pages of paper when possible, they don't weigh any more than clips and you'll save the origami time. Please no staples! Ouch! Nuff said. Mail in highly interesting envelopes to: Ellin Beltz, PO Box 1125, Ferndale, CA 95536. Letters and links only (no long articles with a zillion photos) to my email: ebeltz@ebeltz.net. And for a huge laugh, read this: http://www.northcoastjournal.com/102705/dirt1027.html.

Herpetology 2005

In this column the editorial staff presents short abstracts of herpetological articles we have found of interest. This is not an attempt to summarize all of the research papers being published; it is an attempt to increase the reader's awareness of what herpetologists have been doing and publishing. The editor assumes full responsibility for any errors or misleading statements.

NATTERJACK HABITAT PREFERENCES

C. Miaud and D. Sanuy [2005, Amphibia–Reptilia 26(3): 359-366] followed 19 adult natterjack toads, *Bufo calamita*, equipped with transmitters during and after the breeding period (January to September) in order to estimate their home range area and habitat use in a landscape of cereal agriculture. Median home range area was 0.5 ha (range 0.1–11 ha) during the breeding season (January–April). Home range areas increase during the post-breeding season (April–September), e.g., median minimum concave polygon of 4.1 ha. No relation between home range and toads' body size was observed. Six habitat types were described in the studied area. The proportion of habitats used (i.e., proportion of the pooled positions of 11 toads during the post-breeding season in each habitat) was significantly different from the proportion of available habitats: while crops represented 85% of the available habitat, only 43% of the toads' positions were recorded in this type of habitat. A compositional analysis of habitat preference was performed. At both landscape and individual home range levels, the toads preferred the stone embankments and ditches above all, while the crops were the least preferred habitat. This study highlights the role of habitat linkage and marginal habitats for the persistence of amphibian populations in intensive agricultural and and landscapes.

TADPOLE DENSITY AND INSECTICIDE EXPOSURE

M. D. Boone [2005, J. Herpetology 39(3):416–423] reared four species of anurans (*Rana sphenocephala* [southern leopard frog], *R. blairi* [plains leopard frog], *R. clamitans* [green frog], and *Bufo woodhousii* [Woodhouse's toad]) for seven to 12 months in small, outdoor terrestrial enclosures (1 × 2 m) to examine the consequences of larval competition (via density) and contaminant exposure (via the insecticide carbaryl). Six *R. clamitans*, eight *R. sphenocephala*, eight *R. blairi*, and 10 *B. woodhousii* were added to terrestrial enclosures shortly after metamorphosis and recaptured the following spring. All anurans from low-density ponds were significantly larger than those from high-density ponds, but these differences did not significantly affect survival to or size at spring emergence. However, *R. sphenocephala*, *R. blairi*, and *R. clamitans* that survived to spring had been larger at metamorphosis on average than those that did not survive; in contrast, *B. woodhousii* that survived the winter were smaller at metamorphosis on average than those that did not survive. Carbaryl exposure affected mass at metamorphosis of *R. clamitans* and *B. woodhousii* that were added to enclosures, but this difference disappeared or did not increase by spring emergence. Overall, exposure to carbaryl during the larval period did not have any apparent effects on survival or growth during the terrestrial phase. Anurans were able to offset small size at metamorphosis with terrestrial growth, although there was a trend of reduced overwinter survival for ranids that metamorphosed at a smaller size.

ARBOREAL BEHAVIOR IN GREEN SALAMANDERS

J. L. Waldron and W. J. Humphries [2005, J. Herpetology 39(3):486–492] note that green salamander (*Aneides aeneus*) habitat has been described traditionally as rock outcrop formations that contain moist, but not wet, crevices. Early studies of green salamander natural history claimed arboreal habitat was used secondarily to rock outcrops and in situations where more suitable habitat was unavailable. Although arboreal behavior of western *Aneides* has been well established, arboreal habitat has been deemed "not typical" for green salamanders. This study examined the extent to which green salamanders use arboreal habitat. Surveys were conducted between August 2001 and July 2004 at a study area in Pickens County, South Carolina. Salamander size influenced arboreal habitat use, but gender and reproductive condition did not. There was a positive relationship between tree diameter at breast height and green salamander observations and a negative relationship between tree distance to rock outcrop and salamander observations. Tree selection did not reflect tree species relative dominance, and salamanders favored hardwoods over conifers. Seasonal use of arboreal habitat was distinct, implying that salamanders overwinter in rock outcrops and move into trees and logs at the onset of spring. Salamanders observed during summer were primarily arboreal, but they returned to rock outcrops in late fall. Researchers have largely overlooked arboreal habitat use by green salamanders, and consequently, the importance of arboreal habitat near rock outcrops has been underestimated. Arboreal habitat appears to be an important component of the life history of this declining species, and future survey and monitoring efforts should include searches of arboreal habitat.

EVALUATION OF EGG-LAYING SITES BY A LIZARD

A. M. Socci et al. [2005, Herpetologica 61(3):233-240] report that the microenvironment surrounding a lizard egg will strongly influence its probability of hatching, yet little is known about which environmental cues females use to select favorable nest sites. The authors conducted three experiments using *Norops polylepis* (Polychrotidae) in seminatural enclosures to determine a female's ability to assess soil moisture levels and the presence of leaf-litter cover when selecting an oviposition site. Females laid significantly more eggs in moist soil (42% water content) than in the dry (10%) and saturated (70%) soil treatments. Most eggs (72%) placed in moist soil treatments hatched, whereas none of the eggs in the dry and saturated soil treatments hatched. In a separate choice experiment, females laid significantly more eggs in a "soil-and-leaf-cover" treatment than in "soil-only" or "leaf-cover-only" treatments. These results demonstrate that female *N. polyelpis* can detect variations in water content and leaf cover, and that females prefer microhabitats that likely maximize the survival of their eggs.

SEA KRAIT TAXONOMY

H. Heatwole et al. [2005, Herpetological Monographs 19: 1-136] report that the *Laticauda colubrina* complex previously consisted of three species: *Laticauda saintgironsi* from New Caledonia and the Loyalty Islands; *Laticauda frontalis* from Vanuatu; and *Laticauda colubrina*, a widespread species ranging from the Andaman and Nicobar Islands and the Myanmar-Thai-Malaysian peninsula, through the Indonesian archipelago to New Guinea, north to Palau, the Philippines, Taiwan and the Ryukyu Islands, and southeastward along the island-chain of the Solomon Islands, Vanuatu, Fiji and Tonga. Their geographic variation, based on 1515 specimens involving 33 characters of coloration and scutellation, was analyzed in two different ways: (1) an hierarchical analysis and (2) an analysis of principal components and discriminant function. Sexual dimorphism occurred in many characters and for those, females and males were analyzed separately.

The results confirmed the distinctiveness of the three original species. Within *L. colubrina* different characters displayed slightly different geographic patterns of variation, but overall five general groupings of populations could be discerned: (1) a north-south axis from Sabah, north through the Philippines to Taiwan and the Ryukyus, (2) an east-west axis encompassing localities from the Andaman and Nicobar Islands in the west through New Guinea and the Solomon Islands in the east, (3) the eastern islands of Vanuatu, Fiji, and Tonga, (4) a partially isolated population in Palau, and finally (5) an isolate in southern Papua. Despite significant differences among these regions, different characters showed slightly different patterns of geographic variation across their boundaries; similarly, within each axis the pattern of variation among islands differed for different characters. Divergence was deemed sufficiently consistent to warrant taxonomic distinction only in the case of the population in southern Papua that was accorded recognition as a new species, *Laticauda guineai*. In some characters, widely peripheral populations were more similar morphologically to each other than to more central ones, and alternative hypotheses accounting for this are discussed.

The observed distribution and the geographic patterns of variation are attributable to a combination of present and past ecological restrictions, directions of sea currents, and paleogeography.

EMERALD TREEBOA SYSTEMATICS

N. Vidal et al. [2005, J. Herpetology 39(3):500–503] examined phylogenetic relationships of *Corallus caninus* using DNA samples from five geographically disparate localities from across the range of the species (Guyana, Venezuela, Brazilian states of Pará and Rondô nia, and Peru). The Peruvian sequence was the most divergent (16.2%) and the closest relative of a clade including Brazilian, Guyanan, and Venezuelan populations. Within the latter clade, the most basal lineage was from the state of Pará, followed by the state of Rondônia, which was the closest relative of populations from the Guiana Shield. Preliminary morphological data paralleled molecular results, and it is likely that a separate species of *Corallus* currently included in *C. caninus* occurs in the upper Amazon.

AMPHIBIANS AND INTRODUCED CRAYFISH

M. J. Cruz and R. Rebelo [2005, Amphibia–Reptilia 26(3): 293-303] note that the introduction of predators in amphibian breeding habitats may contribute to the decline or extinction of amphibian populations. *Procambarus clarkii*, a North American crayfish, was recently introduced in the Iberian Peninsula, and is now quite abundant in the southwest, a region with no native crayfish species and where 13 amphibian species may be found. The authors performed mesocosm experiments to evaluate the vulnerability of amphibian embryos and larvae from those species to *P. clarkii*. Despite the presence of alternative food (vegetation and leaf litter), embryo survival in the presence of *P. clarkii* was low for all species except *Bufo bufo*. However, newly hatched *B. bufo* tadpoles were readily consumed. *P. clarkii* reduced larval survival in all species, with those species that in nature have few contacts with predators at the larval stage suffering the highest mortalities. Most larvae reduced their activity and/or altered microhabitat use in the presence of *P. clarkii*, but these behavioral modifications did not lead necessarily to a low vulnerability to predation.

CALIFORNIA LEGLESS LIZARDS

L. A. Kuhnz et al. [2005, J. Herpetology 39(3):395–402] studied the cryptic fossorial legless lizard (*Anniella pulchra*) in a 1.57-ha area of sand dune on the coast of central California. This is the largest and most dense population of *A. pulchra* (N = 3,582; 0.228/m^2) known to date. They documented distribution of animals through systematic removal and relocation of lizards at the site and with GIS analyses. Lizard density was high near shrubs and where soil moisture was greater but lower in disturbed soils and in iceplant. The authors also conducted time-constrained searches and coverboard surveys to analyze the efficacy of standard survey methods for legless lizards. Moderate-impact time-constrained searches were more effective in establishing presence of lizards when compared to low-impact time-constrained searches and coverboard surveys. The data show that standard methods may not be effective in establishing presence or absence of this lizard at low densities. None of the survey methods was effective in predicting the density of lizards actually present.

LARVAL RESPONSES TO PATHOGENS

M. J. Parris et al. [2005, J. Herpetology 39(3):366–372] tested whether an iridovirus (*Ambystoma tigrinum* virus; ATV) could alter patterns of larval life histories in Arizona tiger salamanders (*A. t. nebulosum*). Viral epidemics cause extreme mortality in natural populations and, thus, impose a strong selective force. The authors tested how exposure to ATV during larval development influences survival, growth and frequency of cannibalism by manipulating the presence of ATV in replicated experimental tanks. ATV significantly reduced survival and larval growth. Propensity to become cannibalistic was not related to ATV exposure, suggesting that salamanders cannot facultatively respond to the presence of diseased conspecifics by reducing cannibalism. The results demonstrate that viral pathogens may have both a direct and indirect effect on *A. tigrinum* fitness by reducing survival and growth rate.

Unofficial Minutes of the CHS Board Meeting, October 14, 2005

Linda Malawy called the meeting to order at 7:30 P.M. Board members Jim Hoffman and Jenny Vollman were absent.

Officers' Reports

Recording Secretary: Melanie Aspan read the minutes of the September 16 board meeting. The minutes were accepted as read.

Treasurer: Linda Malawy distributed the September financial reports in Jim Hoffman's absence.

Membership Secretary: Jennifer Spitzer presented a graph which featured a count of 602 members for this month. Jennifer also announced that 1000 membership fliers have been produced featuring our new telephone number. Upon Linda Malawy's request Jennifer outlined the process which is set in motion when a membership is about to expire.

Vice-president: It was decided that December would feature round table discussions. Paul Andreadis has been "penciled in" for the January general meeting to make his presentation "I Like to Watch" featuring his insights from observing herps.

Corresponding Secretary: Prompted by an email she received, Linda Malawy brought up the topic of presenting a list of vets willing to work/experienced with reptiles. Cindy Rampacek offered the website herpvetconnection.com as a good source of vet contacts. Bob Bavirsha broached the subject of sending a questionnaire to vets in the area with an eye to publishing a list.

Sergeant-at-arms: Ron Humbert reported 44 attendees at the September General meeting.

Committee Reports

Shows: Mike Dloogatch passed out fliers for the "Hallowed Halls" event which will take place at the Cultural Center on Saturday October 29. Linda announced that Jenny Vollman is looking for volunteers for the Garfield Park show also taking place on October 29. Notebaert dates are November 5–6 as well as December 3–4. "Snake Days" at the Milwaukee Public Museum will take place November 5–6.

ReptileFest: The dates for the 2006 event have been set as April 8–9 at the University of Illinois at Chicago. The first committee meeting will take place during November. Bob Bavirsha reported that the Tinley Park show (NARBC) was very well attended and was a success for the CHS in that we handed out loads of ReptileFest fliers in addition to selling T-shirts and gaining new memberships. Linda proposed that we send out a thank-you to the NARBC via the *Bulletin*.

Monthly Raffle: We are currently soliciting new donations to revitalize this event.

Library: Steve Sullivan announced the purchase of Mark O'Shea's book, *A Guide to the Snakes of Papua New Guinea*, to be added to the library. Steve also updated the board on the status of the plaque for the Esther Lewis Memorial Library.

General Meetings: Both varieties of the green snake (rough and smooth) will be featured as the Illinois herp at the October meeting.

Old Business

Award Presentations for 2005 Service: Ron Humbert reported that the presentation is slated for the January general meeting.

Midwest Symposium: Mike Dloogatch will be our sole representative as of this date. It was decided that Illinois State Herp T-shirts would be appropriate items to send with Mike as donations for the raffle at this event.

Kingsnake.com Ad: Cindy expressed that she would like to put this item up on the kingsnake website soon.

New Business

Salamander Safari: This event has been scheduled for March 25, 2006, and will again take place at the Plum Creek Nature Center.

Pennsylvania Rattlesnake Round-ups: Most board members had received an email asking our help in denouncing this event. Mike Dloogatch proposed that Deb send a letter in support of the effort of abolishing the yearly round-up.

EPA Grant Proposal: Acting on Dave McGowan's inquiry, Ron Humbert moved that we accept Dave McGowan's request to act as his fiscal agent on his grant proposal to the EPA this November of 2005. Betsy Davis seconded and the motion passed with all in favor.

Membership Survey: Cindy Rampacek offered to donate return envelopes for the purpose of mailing this item to area members. At Linda Malawy's request, Melanie Aspan offered to resend the survey so that it can be determined if a mailing is something we feel will be beneficial.

Roundtable

Erik Williams sent word that there are still open spots for his Sushi Night cryptobranchid fundraiser.

The meeting was adjourned at 9:47 P.M.

Respectfully submitted by Melanie Aspan, Recording Secretary.

Advertisements

For sale: rats and mice—pinkies, fuzzies and adults. Quantity discounts. Please send a SASE for pricelist or call Bill Brant, *THE GOURMET RODENT*, 6115 SW 137th Avenue, Archer FL 32618, (352) 495-9024, E-mail: GrmtRodent@aol.com.

For sale: from **The Mouse Factory**, producing superior quality, frozen feeder mice and rats. We feed our colony a nutrtionally balanced diet of rodent chow, formulated especially for us, and four types of natural whole grains and seeds. Mice starting from: pinks, $.17 each; fuzzies, $.24 each; hoppers, $.30 each; weanling, $.42; adult, $.48. Rats: starting with pinks at $.45 each, to XL at $1.80 each. Discount prices available. We accept Visa, MC, Discover or money orders. PO Box 85, Alpine TX 79831. Call **toll-free** at (800) 720-0076 or visit our website: < http://www.themousefactory.com> .

For sale: **high quality frozen feeders**. Over a decade of production and supply. Seven sizes of mice availabe: small newborn pinks up to jumbo adults. Prices start at $25 per 100. Feeders are separate in the resealable bag, not frozen together. Low shipping rates. Free price list. Kelly Haller, 4236 SE 25th Street, Topeka KS 66605, (913) 234-3358 evenings and weekends.

For sale: One Lizard Lounge (24 × 18 × 25"), like new, with hood, screen, and fluorescent bulb housing with these extras: heat bulb housing, new fluorescent bulb (UVB 5.0), dripper, chameleon handbook and magazine, substrate, reptile rope, plastic plants & background, flexibranch, driftwood (2), water dish, tree stump dripper, sm cricket corral, tongs and timer. All you need is the creature and its food to begin your journey into the fascinating world of reptiles . . . all this for $125 OBO (list price $250–300). Please contact Vicki at 847.825.6319 if interested . . . thanks!

For sale: books. *The Snakes of Arizona* by Jack Fowlie, 1965, 164 pp., b&w photo of each species and subspecies, range maps, excellent condition, signed copy, hardbound, $55; *The Genus* Pseudonaja *(Serpentes;Elapidae) in the Northern Territory* by M. W. Gillam, 1979, 28 pp., 15 figs. (drawings, range maps, b&w photos), taxonomy, behavior, natural history and distribution of this genus, softbound, $12; *Australia's North* by Stanley and Kay Breeden, 1975, 208 pp., many excellent b&w and color photos, a most detailed account of the natural history of Kakadu National Park and other tropical areas of the Northern Territory and Western Australia, DJ, hardbound, $32; *The Big Year* by Mark Obmascik, 2004, 268 pp; the fascinating story of three men's quest to break the record for seeing the most species of birds in North America in one year, DJ, like-new, read once, lists for $25, $4. All books in excellent condition. Postage $2.50 for orders under $25, free for orders of $25 or more. William R. Turner, 7395 S Downing Circle W, Littleton, CO 80122, (303) 795-5128, e-mail: toursbyturner@aol.com.

For sale: Herpetology of Western Australia in 5 volumes. #1 FROGS (1984) by Tyler, Smith & Johnstone; 109 pp. #2 SKINKS (1981) by Storr, Smith & Johnstone; 200 pp. #3 GECKOS & PYGOPODS (1990) by Storr, Smith & Johnstone; 141 pp. #4 DRAGONS and MONITORS (1983) by Storr, Smith & Johnstone; 114 pp. #5 SNAKES (1986) by Storr, Smith & Johnstone; 187 pp. Total of more than 750 pages. All volumes are soft cover with color front. Each is profusely illustrated with color photographs. Condition of books like new; absolutely superb. Sold as a set only = $265.- postpaid. Contact Karl Switak at khs@sonic.net.

For sale: c.b. blue-tongued skinks, *Tiliqua scincoides*, born August 2004, $70 each. Linda Malawy, (630) 717-9955.

For sale: c.b. '03 yellow anacondas, aggressive feeders, perfect health, about 2' long, $100 each; also c.b. '04 reticulated pythons; beautiful hatchlings already feeding on adult mice. These guys are tiger siblings and are available for $100/each as well. Personal checks, money orders and Paypal accepted. Out of state shipping available. If you have questions or would like to purchase an animal call Mark Petros, (847) 836-9426 or E-mail ballpython777@yahoo.com.

Herp Tours: Why pay more? Travel with the International Fauna Society, a 501 (c)3 not-for-profit organization, and experience the Costa Rican rainforest! Stay at the beautiful Esquinas Rainforest Lodge in the untouched herpetological paradise that is Piedras Blancas National Park. Meet new friends, relax in the naturally-filtered swimming pool or in the lush, fauna-filled tropical garden. Discounts for IFS and Chicago Herp Society members. For details, visit The International Fauna Society website at www.faunasociety.org or E-mail: info@faunasociety.org.

Herp tours: Adventure trips to **Madagascar**! Journey somewhere truly unique to seek and photograph nature on the world's least-studied mini-continent. For maximum herp fun and discovery, join Bill Love as we go where few people will ever venture in their lives. Let his experience assure a comfortable tour finding the most colorful and bizarre species on the planet! Get all the details at Blue Chameleon Ventures' comprehensive new website: < http://www.bluechameleon.org> , E-mail: bill@bluechameleon.org, or call (239) 728-2390.

Herp tours: The beautiful Amazon! Costa Rica from Atlantic to Pacific! Esquinas Rainforest Lodge, the Osa Peninsula, Santa Rosa National Park, and a host of other great places to find herps and relax. Remember, you get what you pay for, so go with the best! GreenTracks, Inc. offers the finest from wildlife tours to adventure travel, led by internationally acclaimed herpers and naturalists. Visit our website < http://www.greentracks.com> or call (800) 892-1035, e-mail: info@greentracks.com

Virtual Museum of Natural History at www.curator.org: Free quality information on animals—emphasis on herps—plus expedition reports, book reviews and links to solid information. Always open, always free.

Wanted: To hire housesitter and feeder of female reticulated python in Washington, D.C., for late spring/summer 2006. To learn more, contact kbricker@oceanconservancy.org or call 301-320-4457.

Wanted: Volunteer to help with midwestfrogs.com web site by transcribing videotaped interviews with frog biologists (from VHS). Dave McGowan, dmcgowan3@earthlink.net.

Wanted: Female ball pythons, adults preferred but smaller animals also considered. I am a professional breeder specializing in ball pythons and I can assure you that your animal will be provided with excellent care and optimal living conditions. Mark Petros, (847) 836-9426; ballpython777@yahoo.com.

Wanted: I'm looking for my soulmate. I want to settle down to a family before it is too late. But I have this problem. . . . When we get into hobbies and interests: old popular records, jazz and show tunes, and antique electronics are fine, but when I mention turtles, "What, are you crazy?" So maybe this is a better place to look. Please don't try to separate me from my turtles—at least not most of them. If interested, please drop a line to Ellis Jones, 1000 Dell, Northbrook IL 60062, telling a bit about yourself and giving a phone number.

Line ads in this publication are run free for CHS members—$2 per line for nonmembers. Any ad may be refused at the discretion of the Editor. Submit ads to: Michael Dloogatch, 6048 N. Lawndale Avenue, Chicago IL 60659, (773) 588-0728 evening telephone, (312) 782-2868 fax, E-mail: MADadder0@aol.com.

UPCOMING MEETINGS

The next meeting of the Chicago Herpetological Society will be held at 7:30 P.M., Wednesday, November 30, at the Peggy Notebaert Nature Museum, Cannon Drive and Fullerton Parkway, in Chicago. This meeting will include the annual election of officers and members-at-large of the CHS Board of Directors. Also at this meeting **Bob Bavirsha** will bring some impressive live animals from his collection and speak to us about them.

After the business segment at the December 28 meeting we will break up into "round table" discussion groups on various topics of herpetological interest. Group topics will include snakes, lizards, turtles, frogs and salamanders. There will be a group led by a veterinarian, and if there is sufficient interest there will be a group especially for youngsters.

The regular monthly meetings of the Chicago Herpetological Society take place at Chicago's newest museum — the **Peggy Notebaert Nature Museum**. This beautiful new building is at Fullerton Parkway and Cannon Drive, directly across Fullerton from the Lincoln Park Zoo. Meetings are held the last Wednesday of each month, from 7:30 P.M. through 9:30 P.M. Parking is free on Cannon Drive. A plethora of CTA buses stop nearby.

Board of Directors Meeting

Are you interested in how the decisions are made that determine how the Chicago Herpetological Society runs? And would you like to have input into those decisions? If so, mark your calendar for the December 16 board meeting, to be held at the North Park Village Administration Building, 5801 North Pulaski Road, Chicago. To get there take the Edens Expressway, I-94, and exit at Peterson eastbound. Go a mile east to Pulaski, turn right and go south to the first traffic light. Turn left at the light into the North Park Village complex. At the entrance is a stop sign and a guardhouse. When you come to a second stop sign, the administration building is the large building ahead and to your left. There is a free parking lot to the left and behind the building.

The Chicago Turtle Club

The monthly meetings of the Chicago Turtle Club are informal; questions, children and animals are welcome. Meetings normally take place at the North Park Village Nature Center, 5801 N. Pulaski, in Chicago. Parking is free. For more info call Lisa Koester, (773) 508-0034, or visit the CTC website: http://www.geocities.com/~chicagoturtle.

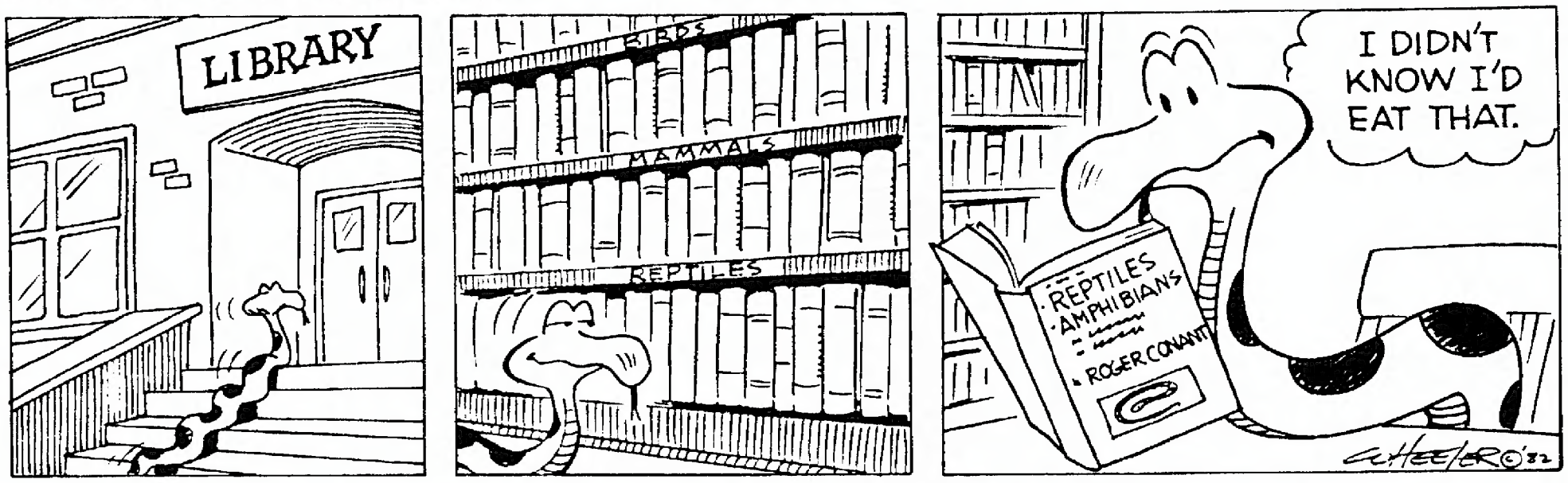
CHS LIBRARY

Take advantage of your membership benefits by checking out a book from the CHS lending library. We've got something on just about every aspect of herping and get new books all the time. Our library receives donations on a regular basis. This means that we have multiple copies of some great books. At the November meeting we will be selling some of our duplicate stock at substantial discounts. Get a few great herp books at the next meeting—just in time for Christmas!

HERP OF THE MONTH

Each monthly meeting will showcase a different herp. CHS members are urged to bring one specimen of the "Herp of the Month" to be judged against the entries from other CHS members. Prizes will be awarded to the top three winners as follows: 1st place—6 raffle tickets at next meeting; 2nd place—4 raffle tickets at next meeting; 3rd place—2 raffle tickets at next meeting. There will be no herp of the month contest in November.

THE ADVENTURES OF SPOT



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